September 3, 1999

OFFICE OF THE HEARING EXAMINER
KING COUNTY, WASHINGTON
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COMBINED REPORT AND DECISION:

A. PROPOSED PLAT
B. SEPA THRESHOLD DETERMINATION APPEAL

SUBJECT: Department of Development and Environmental Services File No. **L97P0036**

BEAVER LAKE ESTATES, DIVISION II
Preliminary Plat Application
Appeals of SEPA Threshold Determination

Location:	Lying on the east side of East Beaver Lake Drive and on both the east and west sides of Southeast 26th Street, approximately between Southeast 24th Place (if constructed) and Southeast 16th Street (if extended)
Applicant:	Pacific Properties Inc., *represented by* **Joel Haggard**, Attorney at Law, 1200 Fifth Avenue #1200, Seattle, WA 98101. Telephone: (206) 682-5635.
Appellant:	Friends of Beaver Lake, *represented by* **David Shank**, 1714 East Beaver Lake Drive SE, Issaquah, WA 98029. Telephone: (425) 392-5010.
Department:	Development and Environmental Services, Land Use Services Division, *represented by* **Lanny Henoch** for subdivision issues and **Barbara Heavey** for SEPA issues, 900 Oakesdale Avenue SW, Renton, WA 98053. Telephone: (206) 296-7168 and (206) 296-7222.

SUMMARY OF RECOMMENDATIONS:

Department's Preliminary Recommendation:	Approve plat, subject to conditions; deny SEPA appeal
Department's Final Recommendation:	Approve plat, subject to conditions (modified); deny SEPA appeal
Examiner's Decision:	Approve plat, subject to conditions (modified); deny SEPA appeal

PRELIMINARY MATTERS:

Complete application:	September 8, 1997
Notice of appeal received by Examiner:	May 13, 1999
Statement of appeal received by Examiner:	May 13, 1999

EXAMINER PROCEEDINGS:

Pre-Hearing Conference:	June 10, 1999
Hearing Opened:	July 28, 1999
Hearing Closed:	August 26, 1999

Participants at the public hearing and the exhibits offered and entered are listed in the attached minutes. A verbatim recording of the hearing is available in the office of the King County Hearing Examiner.

ISSUES/TOPICS ADDRESSED:

- ❑ Density (subdivisions)
- ❑ Cumulative impacts
- ❑ Concurrency
- ❑ Community Plan Policy application
- ❑ Downstream impacts
- ❑ Environmental Policy Act
- ❑ Environmental Policy Ordinance
- ❑ Environmental regulations
- ❑ Erosion
- ❑ Freeway interchanges
- ❑ Groundwater
- ❑ Minimum density
- ❑ Pedestrian safety
- ❑ Pollution
- ❑ Road improvements
- ❑ Schools
- ❑ Water Pollution
- ❑ Wildlife Protection
- ❑ SEPA conditions
- ❑ Shoreline Management Act
- ❑ Soil characteristics
- ❑ Springs
- ❑ Stormwater detention
- ❑ Streams
- ❑ Substantial development permits
- ❑ Surface water conveyance
- ❑ Surface water detention
- ❑ Surface water drainage
- ❑ Traffic impacts
- ❑ Traffic impacts mitgation
- ❑ Traffic safety
- ❑ Wetlands
- ❑ Water Quality

SUMMARY:

Preliminary plat approval granted, subject to MDNS and final plat conditions, for 100 lots, including 42 townhouse lots.

Appeal from SEPA threshold determination denied. MDNS, as amended by DDES during hearing, affirmed.

FINDINGS, CONCLUSIONS AND DECISION: Having reviewed the record in this matter, the Examiner now makes and enters the following:

FINDINGS:

1. **General Information.**

Owner/Developer:	The Trossachs Group Attn: Mike Miller 14410 Bel-Red Rd., Suite 200 Bellevue, WA 98007 Phone: (425) 644-2323
Engineer:	Hugh G. Goldsmith & Associates, Inc. Attn: Tom Uren 1215 – 114th Ave. SE Bellevue, WA 98004 Phone: (425) 462-1080
STR:	1 – 24 – 6
Location:	Lying at the intersection of E. Beaver Lake Dr. and SE 26th St., on both the southwest quadrant of the intersection and east of the intersection.
Zoning:	R-6
Acreage:	Overall – 34.71 West parcel – 2.81 East parcel – 31.9
Proposed Use:	Detached single-family residences and townhouses
Number of Lots:	100 total, 58 for detached single-family and 42 for ownhouses.
Density:	Overall – 2.88 dwelling units per acre West parcel – 2.49 dwelling units per acre East parcel – 2.92 dwelling units per acre
Lot Size:	Detached single-family – Ranges from approx. 5,000 to 10,000 sq. ft. Townhouse – Ranges from approx. 2,500 to 4,300 sq. ft.
Sewage Disposal:	Sammamish Plateau Water and Sewer District
Water Supply:	Sammamish Plateau Water and Sewer District
Fire District: No. 27	
School District:	Issaquah School District No. 411

Complete Application (Vesting) Date: September 8, 1997

2. **Proposal.** The Trossachs Group ("the Applicant") proposes to subdivide two parcels having 34.71 total acreage into 100 residential lots. Fifty-eight of the proposed residential building lots would accommodate single family residences; 42 would accommodate townhouses.

   a. West parcel. The 34.71 acre ownership is divided by Southeast 26th Street. A 2.81 acre segment lies west of Southeast 26th Street. It is designed to accommodate 7 single family residential building lots, a 0.69 acre recreation tract, a sight distance protection tract (benefiting Southeast 26th Street) and an extension of Southeast 22nd Street which will complete that sub-access street. The townhouse building lots are proposed to range in size from roughly 2,500 to 4,300 square feet.

   b. East parcel. The remaining 33.9 acres lying east of East Beaver Lake Drive Southeast and Southeast 26th Street is proposed to accommodate 51 single family residential lots and 42 townhouse building lots. The single family residence

portion would occupy the north end of the parcel. The southern portion of the east parcel would accommodate the 42 townhouse lots. The large area located between the single family and townhouse portions of east parcel would be set aside in perpetuity for wetland preservation, storm water detention and treatment, open space and recreation. The proposed single family residential lot sizes range from 5,000 to 10,000 square feet.

Overall site density is 2.88 dwelling units per acre as proposed. West parcel density would be 2.49 dwelling units per acre, whereas east parcel density would be 2.92 dwelling units per acre. These overall low average densities are due to the large areas to be set aside as permanent open space and sensitive areas (wetland) preservation tracts.

The proposed development is described by Exhibit No.59, "Overall Site Map of Beaver Lake Estates II (print date August 13, 1999)." A casual reviewer of this report may refer to Exhibit No.7, "Applicant's Revised Plat Map (received March 9, 1999), which is provided as Attachment 1 to the Preliminary Report to the Hearing Examiner dated July 28, 1999 (Exhibit No. 2), provided to all interested persons by the Department of Development and Environmental Services ("DDES" or the "Department"). However, the binding proposal upon which the Department bases its final recommendation is Exhibit No. 59 which reflects proposal changes that occurred just prior to the hearing and during the hearing.

3. **SEPA Threshold Determination.**

On April 21, 1999, the Responsible Official of the Department of Development and Environmental Services (DDES) published a Mitigated Determination of Non-significance (MDNS). This determination was made after review of a completed environmental checklist and other environmental documents.

The MDNS imposed the following mitigation conditions:

a. **Issaquah Fall City Road/East Lake Sammamish Pkwy and Front Street I-90 Ramps** (KCCP policies T 107 and T 402)

1) In order to assure fair share payment into the SPAR Road corridor, this project shall pay a pro-rata share towards the North and South SPAR Road projects consistent with the developer's portion of CIP Projects 101289 and 200496. The developer's portion has been calculated at:

CIP 101289: SPAR North:- $219 per single family residential unit.
$131 per multifamily residential unit.

CIP 200496: SPAR South: $299 per single family residential unit.
$179 per multifamily residential unit.

If an updated MPS fee schedule, which includes the North and South Spar Road CIP projects, is adopted at the time of final plat recording for Beaver Lake Estates Phase II and if the developer chooses to pay MPS fees at the time of building permit approval, a pro-rata share payment, as noted above, will no longer be required at the time of final plat approval.

2) The applicant shall enter into a legal agreement that requires a mitigation payment for the Sunset/I-90 Interchange as required by WSDOT. This contribution shall be paid in full prior to final plat recording. Receipt of payment will result in the project being deemed mitigated by WSDOT.

b. **SR 202/Sahalee Way** (KCCP policies T 107 and T 402)

The applicant shall mitigate the safety impacts by entering into a legal agreement that requires mitigation payment to the WSDOT SR 202 project. This contribution shall be paid in full prior to final plat recording. Receipt of payment will result in the project being deemed mitigated by WSDOT.

c. **Patterson Creek Water Quality/Fish Habitat** (KCCP policies NE 302, NE 310, NE 311 and NE 602)

1) All lawn and landscaped areas shall be amended with 4 inches of well-rotted compost. The compost shall be tilled into the native soil to a depth of 6 to 8 inches. Compost shall either comply with guidelines for compost quality on page 6-44 of the King County Surface Water Design Manual, September 1998 draft, or Ecology guidelines for Grade A compost quality (publication 94-38).

In areas where tilling is not feasible, a 6-inch layer of hog fuel or shredded wood (not to be confused with beauty bark) shall be applied on top of the ground surface. Slopes with a slope of 2:1 or greater must use biodegradable erosion control blankets (usually made from coconut fiber, wheat straw, jute, etc.,) with no more than 10% open surface to secure the mulch layer. Where slopes are less than 2:1, and erosion control concerns are minimal (e.g. ditches that do not receive flashy, seasonal, and/or intermittent high volume flows), the mulch layer, at a minimum, must be secured with jute matting with 1/4 inch mesh. However, erosion control blankets are preferred.

Special construction inspection shall be required prior to installation of final landscaping on any lot. A performance bond shall be posted prior to issuance of a building permit to ensure compliance with this condition. A note to the effect shall be placed on the final plat.

2) Rain gardens or infiltration trenches shall be used to the extent feasible to evaporate and/or infiltrate roof runoff. Rain gardens are basins or depressions planted with trees or shrubs that tolerate very wet conditions, such as willow, spirea, etc., and to which runoff water is directed before it is collected in the regular engineered drainage system. If rain gardens are used, a planting plan shall be submitted to DDES for review and approval, prior to engineering plan approval. The applicant shall post a bond to assure the installation of required plantings, and their survival for a period of three years.

3) Porous pavement or other permeable surface materials shall be used for all patios, walkways and paved surfaces outside of the road right of way and not intended for vehicular traffic within the Patterson Creek Basin. A note to this effect shall be placed on the final plat and engineering plans. The final plat and

engineering plans shall graphically show the portion of the subject plat to which this requirement applies.

During review of the engineering plans, the applicant and King County shall determine the feasibility of using porous pavement alternatives to traditional concrete for roads, driveways and sidewalks in the road right of way in the Patterson basin. If determined appropriate by the County, porous pavement shall be utilized. In addition, minimum road widths allowable per King County Road Standards shall be used to reduce the amount of impervious surface in the basin.

d. **On-site Patterson Creek 17 bog** (KCCP policies NE 302, NE 310, NE 317 and NE 319)

1) Except for roof runoff, runoff entering the bog by surface flow shall be treated with a treatment option from the sphagnum bog protection menu in the September 1998 King County Surface Water Design Manual.

2). Roof runoff or runoff entering the bog via interflow or infiltration shall be treated with a treatment option from the basic water quality menu in the September 1998 King County Surface Water Design Manual. If the cation exchange capacity (CEC) of the soils in the infiltration zone is less than 5 me/100mg, then a 5% (by volume) mix of peat and sand shall be worked into the top two feet of soil. Soil amendment shall not be required if it is subsequently determined that only roof runoff will enter the infiltration facility.

3). The periphery of the bog buffer shall be fenced to limit public access into the bog mat. Gates shall be provided at two points to allow access into the bog for scientific and educational purposes.

4) To prevent air-borne dust and pollutants from entering the bog, the entire periphery of the bog shall be planted with a screen of closely-spaced evergreen trees. The trees shall be capable of forming a continuous wall of vegetation from bottom to top and achieve a height of 25 feet within 5 years. This requirement may be eliminated on the eastern and southern edge of the bog adjacent to the existing esker if the esker remains undisturbed.

The moisture regime in the area the trees are to grow should be considered in selecting tree species. Some possibilities include western red cedar and sitka spruce. Native species are preferred and are required within the wetland or wetland buffer. Where roadways adjoin the bog, the trees shall be located between the bog and the roadways as close to the roadway as possible. In some areas, this may require trees to be planted within the wetland buffer or the edge of the wetland itself. No mechanical means shall be used for planting within the wetland or wetland buffer.

A planting plan shall be prepared and submitted to the County for approval before planting is done; however, trees shall be planted as early as feasible after preliminary plat approval and shall be completed before final plat approval. The planting plan shall include plant species, size, locations, maintenance, and monitoring and bonding for a five year period.

5) Because cations contained in the soil and construction materials are highly toxic to sphagnum moss, no runoff water may enter the bog via surface flow during plat and home construction. To implement this requirement, the following conditions shall be met:

- Temporary erosion and sediment control (TESC) measures shall be established and maintained throughout the time plat and home construction activity occurs. A note to this effect shall appear on the final plat and engineering plans, and on the building permit plans.

- Only clearing that is necessary to install TESC measures shall occur prior to clearing for roads and utilities. A note to this effect shall appear on the engineering plans.

- Prior to final Plat approval, clearing in any areas within the PC 17 watershed or any other areas that may drain to PC 17 as a result of site alterations shall be limited to only that necessary for roadway and utility development. A note to this effect shall appear on the engineering plans. Clearing limits for roads, sewers, water, permanent stormwater utilities and TESC facilities shall be marked in the field and approved by King *County prior to any alteration of existing vegetation.*

- The applicant shall designate a TESC supervisor for the PC 17 drainage subbasin. The supervisor shall have demonstrated expertise in erosion control. The site shall be reviewed at least weekly as if construction is occurring in the wet season, and within 24 hours of significant storms. A written record of these reviews shall be kept on-site with copies submitted to DDES within 48 hours. A sign shall be posted at all primary entrances to the site that clearly identifies the TESC supervisor and their phone number. A note to this effect shall appear on the engineering plans, final plat and building permit plans.

- If the applicant elects to install a temporary by-pass in place, construction work related to clearing, grading and filling shall be limited to April 1 to September 31 unless otherwise approved by King County. No soil disturbance (including individual residential or multifamily building pad preparation) shall occur outside the specified time limits unless otherwise approved by King County. A note to this effect shall be placed on the final plat, engineering plans and building permit plans, unless [the next "bulleted" section, below,] applies.

  The applicant shall submit a design at engineering plan submittal for a temporary storm conveyance system designed to bypass all flows during the construction phase (plat infrastructure and building construction). The design shall be approved by King County and installed prior to any clearing activity.

- If the applicant elects not to install a temporary by-pass, the following additional restrictions apply:

Complete soil cover shall be established continuously for all areas in the PC 17 basin for the winter months from September 1st through June 30th. A note to this effect shall appear on the final engineering plans, and the area to which it applies shall be identified on the plans.

Construction work related to clearing, grading and filling shall be limited to the months of July and August. Earthwork may be extended into September on a week by week basis with approval from DDES if the weather is dry. No soil disturbance (including individual residential or multifamily building pad preparation) shall occur outside the specified time limits unless otherwise approved by King County. A note to this effect shall be placed on the final plat, engineering plans and building permit plans. This condition may be waived if the County approves an alternative plan of operation that assures sediment would not be delivered to the bog or to soils which are within the PC 17 drainage sub-basin.

To handle sudden rainstorms in July and August, conventional temporary erosion control methods, including the use of diversion trenches to direct water away from PC17, shall be employed.

6) To prevent tracking of soil on vehicle tires, no construction vehicles from this development may use roads in the PC 17 basin, including that portion of Beaver Lake Drive within the basin, except during the months of July and August, with discretionary extension into September when authorized by DDES. A note to this effect shall appear on the engineering plans, final plat and building permit plans. The TESC supervisor shall monitor this condition and immediately report any violations to the County. This condition shall not apply to construction vehicles delivering building materials to the site once pavement is installed provided the delivery vehicles do not drive on unpaved surfaces. This condition may be waived if the County approves an alternative plan that assures no soil is tracked onto roads draining either directly or indirectly via interflow into PC 17.

7) All earthwork in the areas to the east of PC 17 on lots 59 through 68 and along East Beaver Lake Drive shall be managed so that runoff flows away from the bog, or the restrictions in condition E shall also apply to those areas.

8). Portland cement leaches calcium that can be mobilized by runoff water, and is toxic to sphagnum moss. The use of portland cement for roads, driveways, sidewalks and drainage system elements within the bog watershed should be minimized and substitutes used where feasible, or the runoff from concrete surfaces except for building foundations must be diverted from the PC 17 basin and treated and detained in an adjacent drainage basin.

9). Wash-out of all cement trucks must be tightly controlled so that calcium-containing water is not disposed of either to the ground or the drainage system in the PC 17 drainage basin. A plan shall be prepared to assure that the use of pre-

cast concrete or poured cement within the subbasin, for both the plat and for building construction, is managed without any discharge of calcium-bearing water to the ground or drainage system. This plan shall identify construction activity controls as well as implementation guarantees and monitoring sufficient to achieve the objective of no calcium discharge to ground or to the drainage system. Among the controls proposed shall be the use of an on-site special inspector having the authority to issue stop-work orders who shall be on site at all times when fresh concrete is poured. The plan shall also address how the use of cement by homeowners will be controlled and the control of plaster wall-board waste during home construction. The plan shall be approved by King County as part of engineering plan review. Based on the provisions of the approved plan, appropriate notes shall be placed on the final plat and building permit plans.

10). Exposed aggregate may not be used within the PC 17 drainage subbasin. A note to this effect shall be placed on the final plat, engineering plans and building permit plans.

11). A five (5) year monitoring plan addressing vegetation, water quality and water level fluctuation characteristics of PC 17 shall be prepared by the applicant and approved by DDES. The plan shall identify goals, specify parameters, number of stations, frequencies, instrumentation, duration of monitoring, weather conditions triggering sampling, duration of sampling, data analysis methods including statistical analysis, reporting frequencies and QAQC procedures.

- The applicant shall reimburse administrative costs for County review of the monitoring plan.

- The monetary cost to carry out the monitoring plan shall be established on the basis on three estimates, two by firms with expertise in environmental monitoring and one by the County. The firms providing estimates shall be agreed to jointly by the County and the applicant. If agreement cannot be reached, the County shall establish the cost.

- Administrative costs to track progress of the project, review the monitoring data, and report of finding of the monitoring program shall be estimated by the County. Administrative costs shall not exceed 10% of the monitoring plan cost.

- A mechanism, such as a fund accessible to the County, shall be agreed to by the applicant and King County to assure funds are committed to conduct and administer the monitoring program. This mechanism shall include a process for the disposition of any unspent money.

e. **Off site Patterson Creek 18 bog** (NE 302, NE 310, NE 317 and NE 319)

No surface water shall be discharged from the site to the Patterson Creek 18 wetland bog until the drainage and water quality facilities required to be installed by Trossachs Division 9 variance L99V0008 are operational. A note to this effect shall be included on the final plat and engineering plans.

f. **Education** (NE 302, NE 310, NE 317 and NE 319)

A home owners pamphlet shall be prepared and distributed to home purchasers. The pamphlet shall cover the following:

- The fishery value of Patterson Creek
- The endangered status of Puget Sound salmon
- Alternatives to roof maintenance with toxic chemicals and yard maintenance with pesticides
- Environmentally friendly lawn care practices
- Placement of mulching materials to increase permeability
- Explanation of rain gardens and maintenance procedures if located on single family lots
- The value of the sphagnum bog and the possible chemical contamination by homeowners, including the installation runoff from exposed aggregate concrete.
- The air pollution protection benefits associated with the tree buffer.
- Telephone numbers, internet sources of additional information.

The County shall review and comment on the draft pamphlet before it is finalized.

4. **SEPA Appeal.** On May 12, 1999 the Department received two timely appeals from its Threshold Determination; one, by the Friends of Beaver Lake ("Friends" or the "Appellant"); the other, by James and Eileen Vigil. Having reached settlement with the Department and Applicant, the Vigils subsequently withdrew their appeal. Following considerable pre-hearing review involving motions and argument presented by the parties, the Examiner narrowed the appeal due to limitations upon his jurisdiction. Consequently, the following substantive appeal issues remain:

a. Water quality impacts, resulting from both surface and ground water drainage, requiring review of erosion control, phosphorous and temperature impacts on Beaver Lake, wetland "Patterson Creek 17" or "PC 17", and the Canyon Creek/Patterson Creek drainage.
b. Water quantity concerns regarding Beaver Lake and the Canyon Creek/Patterson Creek drainage.
c. Shoreline management jurisdiction; shoreline management "rural environment" standards applicability.
d. Traffic impacts on Beaver Lake Drive Southeast (which involved pedestrian safety concerns) and other intersections in the community.
e. Wildlife and fishery habitat, particularly with respect to PC 17.
f. Aesthetics, noise, density and character impacts.
g. School enrollment impacts.
h. Cumulative impacts of neighboring and existing pipeline projects, particularly regarding impacts upon Beaver Lake, Canyon/Patterson Creeks and traffic.

As Appellant Friends presented its case, a few of these issues dominated the proceeding; others were barely presented; and, some were not presented. As presented by Appellant Friends, the dominant issues are these: protection of Beaver Lake (particularly with regard to phosphorous impacts); protection of PC 17 (a sphagnum moss bog or fen) from water and habitat degradation due to phosphorous and other contaminants or nutrients. The remaining above listed issues were addressed only to a minor extent with the exception of "school enrollment impacts". Although

the hearing record contains some limited testimony on school enrollment, the issue was not presented or argued by Appellant Friends.

5. **Request for Transportation Concurrency Review.** Appellant Friends also challenged the transportation concurrency determination granted by King County Department of Transportation ("KCDOT"). Ultimately, Friends did not present a case addressing the adequacy of KCDOT's transportation concurrency determination. The transportation planning and engineering consultant retained by Friends withdrew from the proceeding due to conflict of interest concerns. (The consultant apparently will be hired or used by the new City of Sammamish within which the subject property is located.) Upon such late notice, a new consultant could not be timely retained. Friends argued that this limiting situation would not have resulted if KCDOT had complied with the discovery deadlines contained in the Examiner's pre-hearing order. Friends therefore requested that the Examiner require the hearing record to contain the KCDOT materials for later review. The Examiner denied that request and dismissed Friends' request for transportation concurrency review.

6. **Seana Intervention.** Robert Seana, a resident of the Patterson/Snoqualmie flood plain successfully sought intervention in these proceedings for the purpose of addressing Canyon/Patterson Creek water quantity and quality impacts. However, on the first day of hearing, Mr. Seana did not appear. Nor had Mr. Seana participated in pre-hearing disclosure of evidence as required by the Examiner's pre-hearing order. Upon motion of the Applicant, the Examiner dismissed Mr. Seana's intervention. Later that same day, at an evening hearing session located near the interested community, Mr. Seana appeared to testify as an interested person but did not pursue re-instatement as an intervenor. He did not participate through the remaining duration of the hearing comprising six additional days of testimony and argument.

7. **Department Recommendations.** The Department recommends the following:

    a. Proposed plat. The Department recommends granting preliminary approval to the proposed plat of Beaver Lake Estates Phase II as described by the preliminary plat drawing entered as Exhibit No. 59, subject to the 30 conditions of final plat approval stated on pages 25 through 35 of the Department's Preliminary Report to the Hearing Examiner (Exhibit No. 2), *as amended by* Exhibit Nos. 65, 70, and 78. The amendments correct and clarify recommended Condition Nos. 7a, 7c, 10g, 10j, 10k, 17, 20, 21g, 21h, 22, 27c, 28.e.6, and 31. The Department's final recommendation is contained unchanged in the Examiner's decision which begins on page 27 of this report.

    b. SEPA Threshold Determination Appeal. The Department recommends that the Friends' appeal be denied, but offers minor clarification amendments to the MDNS. Condition Nos. 25 through 30 were established by the MDNS as described in Finding No. 3, above. The Department's proposed MDNS amendments are reflected in the Examiner's preliminary plat approval, below. Condition Nos. 27.C., 27.J., and 28.E.6.b., 28.J and 31 amend the MDNS of April 21, 1999.

8. **Applicant's Response.** The Applicant accepts the Department's final recommendation as described in Finding No. 7, above. Further, the Applicant supports the Department's recommendation to deny the Threshold Determination appeal. The Applicant also supported the KCDOT motion to dismiss Friends' request for transportation concurrency review.

9. **Wetland Patterson Creek 17 (PC-17); "the bog".** Alternatively identified in this hearing record as "Wetland 3", the bog at issue will be described hereinafter as "PC-17". PC-17 is a palestrine scrub-shrub, broad leafed evergreen bog. PC-17 comprises approximately 2.0 acres. In addition, the recommended conditions of approval would require a 100-foot wide buffer around PC-17. This wetland-and-buffer is located in the central-southwestern portion of the east parcel, bounded on the west by East Beaver Lake Drive Southeast; on the north by a portion of the proposed 51 single family residential lots; and, on the southeast principally by storm water retention/detention sites and a small recreational tract. See Exhibit Nos. 7 or 59, or Attachment 1 of Exhibit No. 2.

Friends challenges the adequacy of the bog protection conditions contained in the MDNS, project design, conditions of preliminary plat approval and other water quality or bog protection standards that may apply. More to the point, Friends challenges the adequacy of analysis supporting the Department's Threshold Determination and subsequent preliminary plat approval recommendation. Friends argues that the Threshold Determination--an MDNS with numerous conditions--is clearly erroneous based upon probable significant adverse impacts and insufficient analysis of those probable impacts. The Department and the Applicant oppose the appeal, citing a) the breadth and depth of analysis and understanding, and b) natural and engineered circumstances which eliminate or diminish impacts. These factors, they argue, support the reasonableness and appropriateness of the MDNS and subsequent preliminary plat approval recommendation. The following facts are relevant:

a. *The annual water budget for PC-17 will be the same as pre-development conditions*[1]. Flushing storm water through a bog could destroy the bog even when that storm run-off is treated. Preserving the bog annual water budget is a necessity for bog survival. Consequently, no drainage from the developed portions of the property would flow to the bog, except from a sufficient number of townhouse roofs to assure the essential constancy of the bog elevation. The detention facility will control the rate of discharge to the wetland system after development. The diversion will control the volume of run-off to the wetland system after development. Both the rate and the volume of run-off to the wetland will closely match annual existing conditions. Exhibit No. 47 .

b. *Only "clean" water will be used to maintain PC-17 elevation (and quality). The cleanliness of the water is to be achieved by a drainage system that allows only roof run-off to support PC-17.* The only developed area which will drain to the wetland system after development will consist of the roof drains from approximately 31 houses, totaling about 1.1 acres of impervious area. No yard or street drainage will be directed to the wetland system. The preponderance of the evidence supports a finding that roof top drainage is remarkably more clean from pH, other nutrients, pollutants and contaminants than streets, parking areas, and landscaping.

The hearing record contains some evidence (a report from Sweden) suggesting that street and roof top drainage water quality should be sort of averaged because

[1] The drainage plan includes drainage diversions (approved by King County) which will reduce the area of the site which drains to the PC-17 system. Before development, about 13.2 acres of the site drained to the PC-17 system.. To avoid impacts to the bog system in PC-17, the area draining to the wetland system after development will be reduced to 10.4 acres. This reduction in area was designed so that the volume of run-off to the wetland after development will closely match the volume of run-off before development.

they are both sub-components of total urban run-off. The study suggests that if various factors were netted out (e.g., swirling winds), street level contaminant measures would be lower and roof top drainage contaminant measures would be higher. Other expert testimony, however, responds that this "Swedish-effect" might work on a large regional or basin-wide analysis but is immaterial in an individual project analysis. For the individual project, the measures are precisely what they are: roofs are remarkably more clean than ground level impervious surfaces and landscaping. No one leaks oil on roof tops. No one fertilizes roof tops or sprays insecticides upon them.

c. *The roof top drainage will be treated*. It is not to be mixed with any other storm water, treated or otherwise. The roof top drainage will be piped to a wet pond designed consistent with King County Water Surface Management Design Manual standards. Detention Facility CC-5 will be designed as a combination detention/wet pond. The wet pond will be sized using the methods contained in the 1998 SWM manual using the appropriate Vb/Br.

d. *Having been wet pond treated, the roof run-off will then be discharged to a below ground infiltration trench (level spreader) from which water will infiltrate toward the bog.* Detention Facility CC-5 will discharge into a level spreader located at the extreme south end of the wetland (at the maximum possible distance from Beaver Lake Drive) outside of the wetland buffer. The level spreader will be located in a porous sand and gravel formation and much of the discharge from facility CC-5 will infiltrate and reach the wetland system via sub-surface flow.

e. *The proposed project, if approved, would include drainage control facilities designed to intercept and treat run-off from one-half of a 500-foot long segment of Beaver Lake Drive which presently flows toward* the *bog untreated.* There is no evidence in this hearing record that surface run-off sheet flow from the existing Beaver Lake Drive adversely effects PC-17 [2]. Nonetheless, this untreated source of run-off to PC-17 is proposed to be eliminated by re-routing it with curb and gutter improvements and treating it through a wet pond before discharge *downstream* from PC-17.

f. *The roof top rainwater drainage will comprise only 20% of the PC-17 basin.*

g. There are several other ancillary measures required by the MDNS/Plat Conditions designed to protect PC-17 from contaminants, phosphorous and other undesired nutrients, including the following:

- Dense, evergreen plantings;

[2] The hearing record suggests that there may be a problem with diminishing Western Toad population, discussed elsewhere in this report (Finding No.15). However, no testimony or evidence links the existing Beaver Lake Drive run-off to diminishing toad population. On the contrary, the best available scientific evidence in this hearing record suggests that the causes of Western Toad population decrease are not fully known or understood (Richter).

- Stringent temporary erosion and sedimentation control (TESC) measures that prohibit rainy season work; that prohibit lot clearing until after final plat approval; and prohibit run-off water entering the bog during construction.
- Bog periphery fencing to limit public access (except for scientific or educational purposes).
- Dense planting of evergreen trees around the entire bog periphery ("forming a continuous wall of vegetation from bottom to top and achieving a height of 25 feet within 5 years").
- Prohibition of construction vehicles upon any road within the PC-17 basin, except during the months of July and August. [3]
- All earthwork in the areas east of PC-17 and along East Beaver Lake Drive would be required to be managed in such a way as to preclude run-off flows toward the bog.

g. Minimization of Portland cement within the PC-17 basin; detention and treatment of building foundation work drainage; prohibition of cement truck wash-out either to the ground or to the drainage system in the PC-17 drainage basin.

- Prohibition of making exposed aggregate concrete surfaces within the PC-17 drainage basin.[4]
- A five year monitoring plan addressing vegetation, water quality and water level fluctuation characteristics of PC-17.

In each case, the Appellant contends that the measures described in sub-paragraphs a. through f. of this Finding [5]are individually insufficient. The Appellant has not clearly argued, however, that all of these measures taken together would be insufficient. Rather, the Appellant has consistently argued that the PC-17 bog is too delicate, with too many specifics unknown, to proceed without further study.

h. The Appellant suggests that there are no formal assessments that have been prepared nor any "mitigation report" on file. However, the hearing record shows that the MDNS conditions are preceded by 3 pages of analysis; and, that the following studies have been used either by the Department in making its MDNS or have been used in this appeal review.

- Exhibit No. 3a--SEPA Environmental Checklist
- Exhibit No. 3b--Preliminary Geotechnical Report, in which sub-surficial flow capacities were examined.
- Exhibit No. 3c--Wetland Determination, Impact Assessment and Mitigation Measures.

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[3] This condition may be waived if the County approves an alternative plan that assures no soil is tracked onto roads draining either directly or indirectly via inter-flow into PC-17.

[4] Importing previously constructed aggregate surfaces, such as unit pavers, would be acceptable.

[5] Mr. Klein argued that a train of mitigation measures will not completely remove pH or other contaminants, contending that a treatment train of various measures asymptotically approaches a point of no new incremental return or benefit. See Exhibit No. 69. However, this criticism does not fully take into consideration the measures described in Findings 9a., 9b., and 9e. to protect PC-17.

- Exhibit No. 3d--Plant and Animal Communities prepared by Raedeke Associates, Inc.
- Exhibit No. 4--Wetland Vegetation and Water Quality Conditions of Wetland 3 (aka PC-17).
- Exhibit No. 5--SEPA Mitigated Determination of Nonsignificance (in which, as noted above, some analysis is provided).
- Exhibit No. 13--Level I Downstream Analysis
- Exhibit No. 15--Surface Water Design Manual Variance L98VA0109
- Exhibit No. 17--Surface Water Design Manual Variance L99VO008
- Exhibit No. 31--Developed Conditions Drainage Basin Map
- Exhibit Nos. 39a-39c, Exhibit No. 46a, Exhibit No. 46b, Exhibit Nos. 50-53 all reflecting the testimony of Ted Schepper, Andrew Kindig, Tom Uren and Andrew Castelle.

- Exhibit No. 75--Computation of Total Phosphorous Loadings to PC-17 (corrected).

In addition, the hearing record contains numerous studies, some of which support the Applicant's position, some of which support the Appellant's position; some of a broad generalized nature, some specific to the basin, including but not limited to the following:

- Exhibit No. 20--Beaver Lake Management Plan
- Exhibit No. 21--Richard Klein report, "Effectiveness of the Mitigated Determination of Nonsignificance--Beaver Lake Estates Phase II in Preventing Significant Adverse Impacts to the Aquatic Environment"
- Exhibit No. 30--Dr. Christopher May Report titled "An Analysis of the Effectiveness of the Mitigated Determination of Nonsignificance"
- Exhibit No. 33--Elissa Ostergaard Report, "Beaver Lake Water Quality Protection: Wetland Condition of East Lake Sammamish 21 and Patterson Creek 17"
- Exhibit No. 34 and 79--Reports by Appellant's consultant Sarah Spear Cooke.
- Exhibit No. 35--Horner and May Report, "Regional Study Supports Natural Land Cover Protection as Leading Best Management Practice for Maintaining Stream Ecological Integrity".
- Exhibit No. 37--National Pollution Removal Performance Database for Stormwater BMPs (Best Management Practices).
- Exhibit No. 49a--Study titled "Lake Phosphorous Load from Septic Systems by Seasonally Perched Groundwater"
- Exhibit No. 49b--Study titled "Chemical Fate and Transport in a Domestic Septic System: Unsaturated and Saturated Zone Geochemistry".
- Exhibit No. 49c--Study titled "Phosphorous Distribution from Septic Tank Effluent in Coastal Plain Soils"
- Exhibit No. 55--Chang and Crowley Report titled "Preliminary Observations on Water Quality of Storm Runoff from Four Selected Residential Roofs"
- Exhibit No. 63--Palmgren and Bennerstedt Report titled "Heavy Metals in Storm Water-Content and Sources".
- Exhibit No. 68--Study titled " Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs".

i. Among the above listed reports and studies, several--offered by the Appellant--conclude that storm control management practices, even *Best Management Practices,* do not sufficiently protect downstream water and aquatic habitat. *None of these reports or studies specifically considers or evaluates all of the measures taken together as listed in Finding Nos. 9a through 9g, above*. For instance, the drainage control practices used by most developments reviewed in the May reports have been considered obsolete by King County for several years. Such studies are no more relevant to this review than studies which suggest averaging or otherwise "adjusting" roof top and street measurements (see Finding No. ___, above). Dr. Cooke's testimony suggests that the sphagnum moss mat of PC-17 will be lost due to phosphorous and calcium inputs from cement, fertilizers and pesticides, yet the MDNS/Plat Control Measures described in Findings 9a through 9f,above, suggest that the introduction of such contaminants will be nearly impossible. Cooke further suggest that the PC-17 buffer will be insufficient where single family residences are allowed to encroach on the 100-foot buffer, yet Exhibit No. 59 (Applicant's final revised preliminary plat drawing) reveals no such encroachment. The *only* encroachment upon the wetland buffer occurs due to the *existing location* of East Beaver Lake Drive Southeast. As noted in Finding No. 9e, above, run-off from that street segment will be diverted from PC-17 and will be discharged downstream from PC-17 only after being wetpond treated.

j. The Department and its various specialists--wetlands scientists, geologist and so on--having considered the entire hearing record finds no cause to reverse or significantly modify the MDNS.

10. **Beaver Lake.** The residents along the Beaver Lake shoreline and members of the Friends of Beaver Lake hold a strong interest in preserving Beaver Lake water quality. Excessive nutrient content in stormwater run-off generally leads to accelerated lake eutrophication. The Appellant asks for further study in two ways: first, to delay project approval until further monitoring of Beaver Lake conditions may be completed; and, second, to prepare an Environmental Impact Statement. The Department and the Applicant oppose the Appellant and recommend/request that the SEPA Threshold Determination appeal be denied. The following facts and circumstances are relevant to this review:

a. None of the subject property will drain to Beaver Lake upon project completion. Exhibit No. 47, page 3.

b. There will be no construction phase run-off to Beaver Lake. Exhibit No. 47, page 4.

c. Considering sub-paragraphs a and b, preceding, the only theoretical opportunity for phosphorous or similar nutrients/contaminants to reach Beaver Lake from the subject property would occur through groundwater/interflow transmigration from PC-17. Some portion of the groundwater/interflow emanating westward from PC-17 may indeed reach Beaver Lake. The lake and its waterfront properties are separated from PC-17 by East Beaver Lake Drive Southeast. A sort of spring[4]

[4] Dr. Cooke testifies that water passes from PC-17 to a property abutting the west Beaver Lake Drive right-of-way boundary. However, the owners of those neighboring properties (Mr. Liebsack and Mrs. Shearer) deny the existence of any such culvert, a denial supported by the on-site examinations by the County Subdivision Review Engineer (Mr. Whittaker) and the Applicant's on-site technical consultants. The hearing record contains no documentation of Dr. Cooke's assertion.

arises on the Liebsack property immediately west from the west right-of-way boundary of Beaver Lake Drive, opposite PC-17. That spring contributes to a Class III wetland located on the Liebsack property which is artificially drained via pipe through that property and the Shearer property (that abuts the Liebsack property along its north boundary). Any transmigrating groundwater or inter-flow from PC-17 to Beaver Lake would necessarily reach its destination via one of two routes. First, during peak storm periods and for some time thereafter, excess bog elevation may sub-surficially spill over the esker edge, then move sub-surficially laterally beneath East Beaver Lake Drive through its 60-foot wide right-of-way. The second source would be deep inter-flow passing through the bottom of the bog (through the esker or "restrictive layer" of highly dense impacted materials). Such flows would run significantly deeper than the spring or any other surface feature of the Liebsack/Shearer properties. The following additional facts and considerations are relevant:

- Altogether, the bog is located more than 200 feet from Beaver Lake.
- The deep seepage through the restrictive layer bottom of PC-17 is estimated to be approximately 4 acre feet per year, compared to the estimated Beaver Lake inflow[5] of approximately 66.7 million cubic feet. Even if discharged instantaneously, this subsurficial inflow would add only 0.26 percent of the lake volume; or, approximately 0.6 of an inch. Translated to an annual daily average, one might expect .0016 of an inch per day. This suggests that the interflow contribution to Beaver Lake, quantitatively or qualitatively, is--and would continue to be--immeasurably miniscule.
- The average annual in-flow to Beaver Lake is approximately 770 acre feet. Thus one might expect the PC-17 contribution to be in the 0.003 to 0.005 percent of total range; or, approximately one-half of one-half percent or less.
- The Appellant's expert witness (Klein) estimates, based upon observations of the Liebsack/Shearer drainage line, and using Manning's Formula, that the spring produces perhaps 95 gallons per minute or 35 times more water than the PC-17 subsurface outflow estimated by the Applicant's consultants.

  There are several reasons why this estimate is not useful. As measured at the collector box for the Liebsack drainage pipe, the Klein flow estimate includes a larger collection area (and therefore other sources) than merely the PC-17 seepage. These other sources include sheet flow from a few hundred feet of Beaver Lake Drive and the wetland which covers a substantial low lying portion of the Liebsack property (and perhaps Shearer property as well). Further, Klein used Manning's Formula in calculating estimated flow. The hearing record contains the unrebutted engineering testimony that Manning's Formula should not be used in calculating flows for such small pipes due to unreliability resulting from the mathematical disproportionate influence of surfaces, turns and obstructions. In fact, engineering manuals and texts which contain tables for using Manning's Formula typically do not offer information for any pipe smaller than 12 inch diameter.

  Finally, the flow calculations presented by Klein for the Liebsack/Shearer spring/drainage system are not useful for this analysis for a most fundamental reason: if the flow calculations and observations by Klein (and

[5] Beaver Lake Management Plan, Exhibit No. 20.

perhaps Liebsack) were true, and if that drainage came from PC -17, then PC-17 would have drained and died long ago. That is because it is essential to bog viability that in-flow and outflow roughly match; and, further, inflow/outflow must be maintained at a relatively low level or the bog will lose is sphagnum mat and bog characteristics.

d. The preponderance of evidence, based on septic system studies, supports the finding that neither pathogens nor nutrients in the minute quantities described above will reach Beaver Lake.

11. **Canyon/Patterson Creek Drainage.** Treated drainage from the proposed development would flow through wetland PC-18 and wetland ELS-21, Canyon Lake, Canyon Creek, Patterson Creek, then finally Snoqualmie River. The Canyon/Patterson Creek drainage have salmonid habitat value. The basin currently is principally undeveloped [and, incidentally, will remain undeveloped because most of the Patterson Creek basin lies within the R (rural) area designated by the King County Comprehensive Plan]. However, changes to this fishery resource supporting watershed, such as urban development, necessarily must be critically examined. Increases in impervious surface, water temperature, metal concentrations and lowering of dissolved oxygen levels are major impacts of concern associated with urbanization in the Puget Sound area. Because water quality treatment is proposed to occur on site and because the natural flow path from the project to Canyon Creek is long (1.2 miles) and runs through a major wetland area, the impacts from water temperature, metal concentrations and dissolved oxygen levels are not of significant concern according to the Department. The expert testimony and evidence of record supports this finding. The drainage course from the subject property to Patterson Creek is 2.5 miles. Nonetheless, the Department finds that reasonableness and prudence require design characteristics and mitigating conditions directed toward the adverse impacts of increased impervious surfacing. The Appellant argues that analysis of the Canyon/Patterson Creek drainage has been insufficient and disregards cumulative impacts. The following findings are relevant:

a. As noted above, a portion of this drainage is comprised of a series of wetlands that, in turn, drain to wetland PC-25 and ELS-21, an off-site wetland which contains a sphagnum bog component. There is a potential for a cumulative significant adverse impact to the PC-25 and ELS-21 wetland from the increase in run-off volumes as the watershed develops. Both this project and the Trossachs Divison 9 development naturally drain through this off-site bog. To prevent impacts on water chemistry and water levels from development related water volume increases *an amount of run-off equal to the increased volume attributable to the proposed developments will be diverted to bypass the PC-25 and ELS-21 basin via the Patterson Creek high flow bypass* previously constructed to accommodate the initial phases of Trossachs 8 & 9 and subsequent cumulative developments. See variance L99V0008 and the conditions specified pursuant to that decision.

b. In order to provide for treatment above the level required by the Surface Water Drainage Manual wetpond designs to be implemented, the Department in its MDNS required the following additional measures:

- All lawn and landscaped areas shall be amended with 4 inches of well-rotted compost. The compost shall be tilled into the native soil to a depth of 6 to 8 inches. Compost shall either comply with guidelines for compost quality on

page 6-44 of the King County Surface Water Design Manual, September 1998 draft, or Ecology guidelines for Grade A compost quality (publication 94-38).

- In areas where tilling is not feasible, a 6-inch layer of hog fuel or shredded wood (not to be confused with beauty bark) shall be applied on top of the ground surface. Slopes of 2:1 or greater must be treated with biodegradable erosion control blankets (usually made from coconut fiber, wheat straw, jute, etc.,) with no more than 10% open surface to secure the mulch layer. Where slopes are less than 2:1, and erosion control concerns are minimal (e.g. ditches that do not receive flashy, seasonal, and/or intermittent high volume flows), the mulch layer, at a minimum, must be secured with jute matting with 1/4 inch mesh. However, erosion control blankets are preferred.

- Special construction inspection shall be required prior to installation of final landscaping on any lot. A performance bond shall be posted prior to issuance of a building permit to ensure compliance with this condition. A note to the effect shall be placed on the final plat.

- Rain gardens or infiltration trenches shall be used to the extent feasible to evaporate and/or infiltrate roof runoff. Rain gardens are basins or depressions planted with trees or shrubs that tolerate very wet conditions, such as willow, spirea, etc., and to which runoff water is directed before it is collected in the regular engineered drainage system. If rain gardens are used, a planting plan shall be submitted to DDES for review and approval, prior to engineering plan approval. The applicant shall post a bond to assure the installation of required plantings, and their survival for a period of three years.

- Porous pavement or other permeable surface materials shall be used for all patios, walkways and paved surfaces outside of the road right of way and not intended for vehicular traffic within the Patterson Creek Basin. A note to this effect shall be placed on the final plat and engineering plans. The final plat and engineering plans shall graphically show the portion of the subject plat to which this requirement applies.

- During review of the engineering plans, the applicant and King County shall determine the feasibility of using porous pavement alternatives to traditional concrete for roads, driveways and sidewalks in the road right of way in the Patterson basin. If determined appropriate by the County, porous pavement shall be utilized. In addition, minimum road widths allowable per King County Road Standards shall be used to reduce the amount of impervious surface in the basin.

In addition, the MDNS requires that, "no surface water shall be discharged from the site to the Patterson Creek 18 wetland bog until the drainage and water quality facilities required to be installed by Trossachs Division 9 (variance L99V0008)".

c. The education program required by the MDNS provides for the following:

A home owners pamphlet shall be prepared and distributed to home purchasers. The pamphlet shall cover the following:

- The fishery value of Patterson Creek

- The endangered status of Puget Sound salmon
- Alternatives to roof maintenance with toxic chemicals and yard maintenance with pesticides
- Environmentally friendly lawn care practices
- Placement of mulching materials to increase permeability
- Explanation of rain gardens and maintenance procedures if located on single family lots
- The value of the sphagnum bog and the possible chemical contamination by homeowners, including the installation runoff from exposed aggregate concrete.
- The air pollution protection benefits associated with the tree buffer.
- Telephone numbers, internet sources of additional information

The County shall review and comment on the draft pamphlet before it is finalized.

Probably, with no other measures taken, the education program would yield minimal results downstream. However, given the other controls required by the MDNS and plat approval conditions, it serves as a useful ingredient to the recipe for overall success.

12. **Traffic.** As noted in Finding No. 3, above, the MDNS requires the Applicant to make "fair share" (pro-rata) payment to the SPAR corridor, the Sunset/I-90 interchange and the SR 202/Sahalee Way project. Regarding transportation concurrency, see Finding No. 5, above. The project is expected to generate approximately 808 vehicle trips per day. *None of these projected trips will necessarily use Beaver Lake Drive.* The northern single family portion of this proposed development will obtain ingress/egress via 263rd Place Southeast through the Trossachs development. The southern 7 single family lots and 42 townhouse lots will obtain access from Southeast 26th Street. The transportation certificate of concurrency issued for Beaver Lake Estates Division II indicates that transportation improvements or strategies will be in place at the time of development, or that a financial commitment will be in place to complete the improvements or strategies within 6 years, pursuant to RCW 36.70A.070(6).

KCC 14.80 establishes intersection capacity and design standards. The KCDOT Road Services Division Review determined that the proposed development would have a significant impact on the following intersections:

- Issaquah-Fall City Road/Issaquah Pine Lake Road
- Issaquah-Fall City Road/East Lake Sammamish Parkway
- I-90/Front Street
- SR 202 corridor.

As noted above, the MDNS addresses all of these situations except one. That exception is the Issaquah-Fall City Road/Issaquah Pine Lake Road intersection, where improvements are currently under construction to improve functioning.

The Applicant, the Department advises, will be required to pay MPS (Mitigation Payment System) fees as a condition of completing Beaver Lake Estates Division II. The MPS payments are required in addition to the road improvements required for subdivison approval and in addition to the critical intersections discussed above in this finding. Located in MPS zoned 407, an area similar to a census tract in size, that is used to calculate project traffic impacts, this Applicant will be required to pay $2,204 for each single family residence and $1,322.40 for each townhouse, although that amount may be subject to adjustment necessary to comply with the fee ordinance in effect at the time the fee is actually collected (some fee payments may be postponed

until building permit issuance). Thus, this development will generate approximately $170,132 in MPS fee payments.

13. **School Enrollment Impacts.** As indicated above, the Appellant made no presentation on school enrollment impacts. As for the preliminary plat review, the record shows that the Issaquah School Board has adopted capacity figures which indicate the District has adequate capacity to accommodate the students generated by this proposal. The District has a six year capital facilities plan which is updated and re-adopted annually. That plan indicates sufficient existing or future capacity and resources to meet projected growth for the next six years. The plan calls for a mix of permanent and temporary facilities to meet capacity demand. The District opened a new high school in 1997 and competed a middle school addition in 1998. The plan provides for new elementary schools to open in 2000 and 2004, as well as a new middle school in 2001. According to the Department, Issaquah School District voters recently approved a construction bond levy for new school capacity construction.

    Not withstanding the determination of adequate school capacity (based on KCC 21A.28.140 and RCW 58.17.110), the Applicant nonetheless will be required to pay an impact fee of $6,152 per single family residence and $1,432 per townhouse residence. Payment of 50% of the school enrollment impact fee, as calculated by a fee schedule then in effect, will be required as a condition of final plat recording. The remaining 50% must be paid on a per lot basis as building permits are issued.

14. **Shoreline Management Act Jurisdiction.** Appellant Friends argues that a Shoreline Management permit should have been required or, at the very least, the project should contain no greater residential density than permitted by the Rural Environment contained in the King County Shoreline Management master program. The Beaver Lake shoreline is designated Rural by that master program. The relevant facts are these:

    a. The proposed development is located more than 200 feet from the Beaver Lake shoreline. In fact, the nearest segment of the proposed development (recreation tract "R") lies approximately 340 feet from the Beaver Lake shoreline. Exhibit No. 59.

    b. Beaver Lake does not influence PC-17 or PC-18. That is because these wetlands rest at a significantly higher elevation than the lake. Any lake influence upon the bog would occur only in the instance that water ran uphill.

    c. The area obviously is not "tidal". This fact makes irrelevant the wetland and associated definitional criteria related to tidal behavior that is contained in the Washington Administrative Code.

    d. Neither PC-17 nor PC-18 is connected to Beaver Lake via culvert. This fact is discussed further in Finding No. 10, above.

    e. No development is proposed to occur within any wetland or, for that matter, within any wetland protection buffer area. The protective buffer to be established around PC-17 is 100 feet wide. For PC-18, a wetland of lesser significance, the buffer is somewhat narrower.

    f. Beaver Lake Drive, a rural standard neighborhood collector street developed within a 60-foot wide county right-of-way, separates the proposed development from Beaver Lake. It also separates Beaver Lake PC-18 and PC-17 from the residentially developed waterfront lots along the Beaver Lake East shore. Those lots range in depth from approximately 300 to 400 feet.

15. **Western Toad.** Conceding that there is no direct cause and effect relationship, Klaus Richter observes a steep decline in Western Toad population following development of Beaver Lake Estates Division I. The Western Toad population throughout the Northwest is declining and has disappeared from nearby Pine Lake. The record shows that there is limited data available to assess the impacts of development in this vicinity upon the Western Toad. The principal expert witness guarding the threatened Western Toad population (Richter) concedes that monitoring of this amphibian population would not be valuable or economically justifiable given present regulatory standards.

    The Western Toad recently has been listed by the Washington State Department of Fish and Wildlife ("WDOFW") as a "species of concern". However, at the time the Department issued its threshold determination, the Western Toad had not been designated or classified as a threatened species, protected species, or species of concern. King County Comprehensive Plan policy NE-604 does not identify the Western Toad as a "candidate" priority species. Nor does King County Comprehensive Plan NE-605. Policy NE-606 states that the identification of species which need protection "shall occur one time during the development review process." Policy NE-607 directs King County to regularly review the WDOFW list of priority species and "other scientific information on important local species" to evaluate whether any species should be added or deleted from the list in policies NE-604 and NE-605. Although the hearing record shows that the Western Toad requires upland areas as well as wetland/bog areas, there is no evidence in the record suggesting *how much* upland area a Western Toad population requires. Nor does the hearing record show that the development patterns of Pine Lake make it comparable or relevant to PC-17 with its 100 foot wide buffer and functional relationship to wetland ELS-21 downstream. The hearing record provides no inkling as to whether Western Toad population loss is due more to loss of habitat area or to water/habitat degradation.

16. **Cumulative Review.** The MPS traffic impact fee system and the interlocal agreement with WSDOT, both of which provide basis for the conditions of final approval of Beaver Lake Estates Division II, comprehensively consider cumulative traffic impacts. The traffic concurrency determination system also provides cumulative review of traffic impacts for all projects pending.

    The facts recited in Finding No. 10, above, eliminate cause for any further cumulative Beaver Lake impact review--most particularly, the fact that none of the surface stormwater flows from Beaver Lake Estates Division II will drain to Beaver Lake and subsurface flows will be so minor as to be immeasurable.

    The school enrollment impact analysis and fee system established by KCC 27.44 and KCC 21A.28 were created to address cumulative enrollment impacts resulting from residential development. The information, judgements and fee assessment agreed to by the Issaquah School District demonstrate that the proposed development complies with the adopted cumulative impact standards.

    The testimony of Barbara Heavey reveals a long, complex and comprehensive inter-departmental review of cumulative impacts to the Canyon/Patterson Creek basin. Such impacts are mitigated by the factors described in Finding No. 11, above.

    Regarding utilities, the Sammamish Plateau Water and Sewer District, based upon its review of capacity and pending projects, issued certificates of service availability for both sewer and water.

17. **Department Report Adopted.** The DDES Preliminary Report to the Examiner dated July 28, 1999 (Exhibit No. 2) is found factually accurate and is adopted here by this reference. Should the plat decision below be appealed to the Metropolitan King County Council, or should the SEPA

Threshold Determination appeal decision below be appealed to Superior Court, any copy of this report provided to a higher review body will be accompanied by a copy of the DDES report.

CONCLUSIONS:

1. When a threshold determination is appealed, the Hearing Examiner's review has two parts: an inquiry into the adequacy of the information used to make the determination and then an evaluation of the determination itself. Although under WAC 197-11-335, the standard for the adequacy of information is set at that which is "reasonably sufficient to evaluate the environmental impact of a proposal," any inadequacy may be remedied under the authority of KCC 20.24.080, which allows the Hearing Examiner to examine all available information.

   The evaluation of the decision is controlled by RCW 43.21C.090, which decrees that the decision of the governmental agency on the significance (DS) or non-significance (DNS) of a proposal shall be accorded substantial weight. Having reviewed this "substantial weight rule", the Washington Supreme Court in Norway Hill Preservation Association v. King County , 87 WAII.267 (1976), affirmed by several decisions since, determined that the standard of review of any agency negative threshold determination is whether the action is "clearly erroneous". Further, to be clearly erroneous, the reviewer must find with a definite and firm conviction that a mistake has been made. Finally, this mistake must result in a significant adverse impact that has not been mitigated.

   This standard places on those contesting the agency decision the burden of showing that that decision was not supported by the evidence on which it was based. WAC 197-11-330 lists factors that may be considered as part of a decision on the significance of a proposal's impacts. Generally, a DS is made only when, based on the information before it, the agency concludes that there are probable significant adverse impacts associated with a proposal and these impacts will not be mitigated by existing regulations and there are no additional conditions known to the agency, at the time of the determination, that would mitigate those impacts.

   Additionally, when the agency's decision imposes conditions (MDNS) a further level of inquiry may be made into the adequacy of those conditions. To be adequate, the conditions must mitigate significant adverse impacts of the proposal that have been specifically identified, must be based on policies identified by KCC 20.44.080 as sources of substantive SEPA authority, and must be reasonable and capable of being accomplished. Under KCC 20.24.080, the Hearing Examiner may impose additional conditions, modifications, or restrictions as appear necessary to make the application or appeal compatible with the environment or in conformance with existing laws, plans, policies, etc. Under WAC 197-11-660, the policies used as substantive SEPA authority for an MDNS must have been in effect at the time the threshold determination was issued.

2. Both common sense and the 14th amendment suggest that equally situated developers should be treated equally. From this fundamental of American jurisprudence comes a concern expressed by the Appellant and others that, in this case, similarly or comparably situated developers or developments are not being treated similarly or comparably. The Appellant bases this concern upon the fact that other major developments proposed or approved within the "Beaver Lake basin" have all been subjected to Environmental Impact Statement preparation and review--Beaver Dam, Beaver Lake Estates Division I, Norris Estates and Trossachs. As it turns out, however, only 1.6 acres of Beaver Lake Estates Division II (5% of the site) lies within the Beaver Lake drainage basin. Further, following development of the proposed subdivison, *none* of Beaver Lake Estates Division II will lie within the Beaver Lake drainage basin.

There are other characteristics which distinguish Beaver Lake Estates Division II from these preceding or pending developments. Beaver Dam, Trossachs and Beaver Lake Estates Division I precede the present proposal by several years. They precede development and adoption of the Beaver Lake Management Plan and King County Public Rule PUT 8-7 regarding implementation of that plan. The preliminary plat vesting and environmental review for these three neighboring developments occurred before adoption of the 1994 King County Comprehensive Plan adopted to comply with the Washington State Growth Management Act; before Council adoption of the zoning necessary to implement the Growth Management Act and Comprehensive Plan; and, importantly, before adoption of the 1998 Surface Water Management Design manual. (Beaver Lake Estates Division II also precedes the 1998 Surface Water Management manual, but the Applicant has agreed to water control facilities which meet or exceed the manual.) The Beaver Dam project included 114 dwelling units plus a large golf course (a major phosphorous management challenge). Trossachs, with 490 units (plus reserve tracts for significantly more) weighed in at nearly 5 times the size of Beaver Lake Estates Division II. The Beaver Lake Estates Division I proposal included a reserve tract that would double its size in later years. The EIS for that project, of course, served as one of the environmental documents in the Department's review of the instant case. Norris Estates, at 230 dwelling units, proposes significantly different drainage solutions, will generate significant drainage *within* the Beaver Lake basin and includes 2.3 times the number of units as Beaver Lake Estates Division II.

In sum, the factors which distinguish this project from the other proposed developments within the same basin are numerous, important and telling.

3. KCC 20.44.080 addresses substantive authority. It adopts as substantive authority, *inter alia*, the King County Comprehensive Plan, King County Zoning Code, King County Surface Water Run-off Policy. KCC 20.44.080.C states that where the county has adopted certain regulations to systematically avoid or mitigate adverse impacts, *those standards and regulations will normally constitute adequate mitigation of the impacts of the new development.* Among those standards, KCC 20.44.080 cites KCC 21A.24, the chapter which sets standards for environmentally sensitive areas. However, KCC 20.44.080.C establishes a standard by which more stringent standards may be applied (provided, of course, that they comport with the King County Comprehensive Plan and the State Environmental Policy Act).

> Unusual circumstances related to a site or to a proposal, as well as environmental impacts not mitigated by the foregoing regulations, will be subject to site specific or specific SEPA mitigation.

In this case, the Appellants have not argued an "unusual circumstances" case. Rather, the Appellant has principally argued that the information used by the Department was/is insufficient. The absence of an explicit "unusual circumstances" case regarding wetland and drainage issues probably is not consequential with respect to drainage an wetland issues. The record contains substantial information and argument which could be argued to support such a case. However, the Appellant has made no case for unusual circumstances whatsoever regarding land use, density, neighborhood character and related issues.

4. There is no indication in the record that the Division erred in its *procedures* as it came to its mitigated (threshold) determination of non-significance.

5. The preponderance of evidence supports a conclusion that the Department's MDNS is reasonable and appropriate and that no mistake has been made. There is a substantial amount of information in the record regarding the various drainage, geologic, hydrologic an vegetative impacts asserted by the Appellant. The Department has not been unaware of these issues and has investigated (and re-investigated) them, but has arrived at conclusions which differ from the Appellant's. The

Department, having had access to the variety of issues and points of view and information expressed by the Appellants and others, maintains its original determination of non-significance. The Department's judgement, in this case, must be given substantial weight. The desire for more or better or more perfect information does not invalidate the immense body of information contained in this record--information which is certainly sufficient and that certainly supports the reasonableness and appropriateness of the MDNS as amended, below.

6. The Western Toad situation is troublesome, but it cannot be concluded that the Department's inaction with respect to the Western Toad is "clearly erroneous" when the Department has dutifully implemented adopted law and policy. As Mr. Richter suggested, review and revision of the habitat protection laws is needed.

7. In view of the entire record as submitted and in view of the State Environmental Policy Act, the Department's decision regarding all environmental issues reviewed here is not clearly erroneous and is supported by the preponderance of the evidence.

8. Based upon the whole record, and according substantial weight to the determination of environmental significance made by the Land Use Services Division, it is concluded that approval of this subdivision *as recommended below* would not constitute a major action significantly affecting the quality of the environment.

9. If approved subject to the conditions recommended below, the proposed subdivision will comply with the goals and objectives of the Comprehensive Plan, Subdivision and Zoning Codes, and other official land use controls and policies of King County.

10. If approved subject to the conditions recommended below, this proposed subdivision will make appropriate provision for the public health, safety and general welfare and for drainage ways, streets, other public ways, water supply, and sanitary wastes; and it will serve the public use and interest.

11. The conditions recommended in the Land Use Services Division's Preliminary Report as amended below are in the public interest and are reasonable requirements.

DECISION: SEPA THRESHOLD DETERMINATION APPEAL.

The appeal is DENIED.

The MDNS issued by the Department of Development and Environmental Services on April 21, 1999 is AFFIRMED, subject to the minor modifications indicated by text underlining in recommended conditions 25 through 30, below.

DECISION: PROPOSED PLAT.

The proposed plat of Beaver Lake Estates Division II as shown in the revised preliminary plat drawing incorporated in this hearing record as Exhibit No. 59, is GRANTED PRELIMINARY APPROVAL, *subject* to the following conditions of final plat approval:

1. Compliance with all platting provisions of Title 19 of the King County Code.

2. All persons having an ownership interest in the subject property shall sign on the face of

the final plat a dedication which includes the language set forth in King County Council Motion No. 5952.

3. The plat shall comply with the density requirements of the R-6 zone classification. All lots shall also meet the minimum dimensional requirements of the R-6 zone classification and shall be generally as shown on the face of the approved preliminary plat, except that minor revisions to the plat which do not result in substantial changes may be approved at the discretion of the Department of Development and Environmental Services.

4. The applicant must obtain final approval from the King County Health Department.

5. All construction and upgrading of public and private roads shall be done in accordance with the King County Road Standards, established and adopted by Ordinance No. 11187.

6. The applicant must obtain the approval of the King County Fire Protection Engineer, to demonstrate compliance with the fire hydrant, water main, and fire flow standards of Chapter 17.08 of the King County Code.

7. Final plat approval shall require full compliance with the drainage provisions set forth in King County Code 9.04. Compliance may result in reducing the number and/or location of lots as shown on the preliminary approved plat. Preliminary review has identified the following conditions of approval which represent portions of the drainage requirements. All other applicable requirements in KCC 9.04 and the Surface Water Design Manual (SWDM) must also be satisfied during engineering and final review.

   a. Drainage plans and analysis shall comply with the 1998 King County Surface Water Design Manual and applicable updates adopted by King County. DDES approval of the drainage and roadway plans is required prior to any construction.

   b. Current standard plan notes and ESC notes, as established by LUSD Engineering Review, shall be shown on the engineering plans.

   c. The following note shall be shown on the final recorded plat:

      "Except for lots designated for infiltration systems, all building downspouts, footing drains, and drains from all impervious surfaces such as patios and driveways shall be connected to the permanent storm drain outlet as shown on the approved construction drawings # _____ on file with DDES and/or the King County Department of Transportation. This plan shall be submitted with the application of any building permit. All connections of the drains must be constructed and approved prior to the final building inspection approval. For those lots that are designated for individual lot infiltration systems, the systems shall be constructed at the time of the building permit and shall comply with plans on file Two drainage variances were approved in connection with this subdivision. L98V0109 was approved for Beaver Lake Estates II, and L99V0008 was approved for both Beaver Lake Estates II and Trossachs Division No. 9. All conditions of approval for these two variances, as they pertain to Beaver Lake Estates II, shall be met and reflected on the engineering plans".

      Variance L98V0109 is conditioned to require the use of the 1998 King County Surface Water Design Manual and the Level Two Flow Control methodology including a 20% volumetric safety factor.

9. Individual lot stormwater infiltration is proposed for Lots 94 thru 97. A proposed, typical design of the infiltration design shall be shown on the plans at engineering plan submittal. Appropriate geo-technical evaluation shall be provided at engineering plan submittal to show infiltration feasibility, as required by the 1998 King County Surface Water Design Manual.

   For Lots 94 thru 97, the infiltration systems shall be constructed at the time of building permit issuance and shall comply with the 1998 Manual. The following note shall be placed on the final plat: "Individual stormwater infiltration systems for Lots 94 thru 97 shall be designed and constructed as part of the building permit review. These systems shall be designed according to the 1998 King County Surface Water Design Manual."

10. The proposed subdivision shall comply with the 1993 King County Road Standards (KCRS) and the following road improvements shall be constructed.
    SE 16th St. shall be extended west from the existing pavement in the Trossachs development to its intersection with 263rd Ct. SE/263rd Pl SE. This portion of SE 16th St. shall be improved as a urban neighborhood collector. A barricade shall be installed at the west end of the intersection to prohibit vehicular access further to the west, except emergency access. The design of the barricade shall be reviewed and approved by DDES at engineering plan review.

    b. Two-Sixty-Third Place SE shall be improved to the urban subcollector standard. This road shall be connected with the existing pavement at the east plat boundary

    c. SE 21st Pl./263rd Ave. SE shall both be improved to the urban subaccess road standard.

    d. SE 23rd Pl. shall be improved to the urban subaccess road standard.

    e. SE 22nd St. shall be improved to the urban subaccess road standard. The existing temporary turnaround at the west end shall be eliminated and the road connected from the existing pavement to SE 26th St. Plans for restoring the abandoned turnaround area shall be shown on the engineering plans.

    f. 263rd Court SE shall be improved to the urban minor access road standard.

    g. Lots 37 through 42, Lots 57 through 59, and lots 88 through 92 shall be served by private access tracts, improved according to Section 2.09 of the King County Road Standards.

    h. FRONTAGE: Beaver Lake Drive (along the east section of the plat) shall be improved to the urban neighborhood collector standard. This urban improvement shall begin at the existing curb/gutter/sidewalk improvements on SE 26th St., and continue to the northeast to the beginning of the curve for the new right-of-way for SE 16th St. From this point, Beaver Lake Drive shall be improved to the rural neighborhood collector standard (with a paved shoulder on the east side of the roadway), and these improvements shall follow the existing road right-of-way, rather than the revised road right-of-way alignment. This rural road improvement shall extend to the north boundary of the plat.

    The south side of Beaver Lake Drive (adjacent to Tract R in the west section of the plat) shall be improved to the rural neighborhood collector standard. (With regard to the existence of a separated walkway in the vicinity, the applicant may seek a variance from shoulder improvements, which may be granted if deemed appropriate by the King County Road Engineer.)

c. Tracts A and Q (adjacent to Lots 85 and 100) shall be dedicated to King County as road right-of-way, to assure adequate sight distance. Northeast of Tract A, i.e., east of the plat boundary and in the Trossachs development, a public easement or deeded tract shall be provided to assure adequate sight distance from the intersection of 263rd Court SE/SE 16th St.

j. All lots in the subject plat shall have at least twenty feet of frontage road right-of-way or access tract serving the lot. Lots 85, 90 and 91 shall be revised accordingly.

k. Modifications to the above road conditions may be considered according to the variance procedures in Section 1.08 of the King County Road Standards.

11. All utilities within proposed rights-of-way must be included within a franchise approved by the King County Council, prior to final plat recording.

12. The applicant or subsequent owner shall comply with King County Code 14.75, Mitigation Payment System (MPS), by paying the required MPS fee and administration fee as determined by the applicable fee ordinance. The applicant has the option to either: (1) pay the MPS fee at final plat recording, or (2) pay the MPS fee at the time of building permit issuance. If the first option is chosen, the fee paid shall be the fee in effect at the time of plat application and a note shall be placed on the face of the plat that reads, "All fees required by King County Code 14.75, Mitigation Payment System (MPS), have been paid." If the second option is chosen, the fee paid shall be the amount in effect as of the date of building permit application.

13. Lots within this subdivision are subject to KCC 21A.43 and Ordinance 13338 which imposed impact fees to fund school system improvements needed to serve new development. As a condition of final approval, fifty percent (50%) of the impact fees due for the plat shall be assessed and collected immediately prior to recording, using the fee schedules in effect when the plat receives final approval. The balance of the assessed fee shall be allocated evenly to the dwelling units in the plat and shall be collected prior to building permit issuance.

14. There shall be no direct vehicular access to or from Beaver Lake Dr., SE 26th St., SE 16th St. from those lots which abut these streets. A note to this effect shall appear on the final plat and engineering plans.

15. Road right-of-way shall be dedicated to King County to accommodate the revised alignment for Beaver Lake Dr. at the north end of the plat. (Improvement of the re-aligned right-of-way, i.e., the "T" intersection, is not required as part of the development of the subject plat.)

16. Off-site access to the subdivision on SE 16th St. and on SE 22nd Pl. shall be over a full-width, dedicated and improved road which has been accepted by King County for maintenance. If the proposed access road has not been accepted by King County at the time of recording, then said road shall be fully bonded by the applicant of this subdivision.

17. Lots 37 – 42 shall have undivided ownership of the access tract serving these lots and be responsible for its maintenance. Lots 57 – 59 shall have undivided ownership of the access tract serving these lots and be responsible for its maintenance. Lots 88-92 shall have individual ownership of the access tract serving these lots and shall be responsible for its maintenance. A note to this effect shall appear on the final plat and engineering plans.

18. A planter island shall be provided within the "eyebrow" north of Lots 14 – 17. The landscaping within the island shall be maintained by the homeowners association.

19. Planter islands (if any) within the cul-de-sac turnaround bulbs shall be maintained by the abutting lot owners or the homeowners association. A note to this effect shall appear on the final plat and engineering plans.

The following note shall be shown on the final plat and engineering plans:

RESTRICTIONS FOR SENSITIVE AREA TRACTS AND SENSITIVE AREAS AND BUFFERS

Dedication of a sensitive area tract/sensitive area and buffer conveys to the public a beneficial interest in the land within the tract/sensitive area and buffer. This interest includes the preservation of native vegetation for all purposes that benefit the public health, safety and welfare, including control of surface water and erosion, maintenance of slope stability, and protection of plant and animal habitat. The sensitive area tract/sensitive area and buffer imposes upon all present and future owners and occupiers of the land subject to the tract/sensitive area and buffer the obligation, enforceable on behalf of the public by King County, to leave undisturbed all trees and other vegetation within the tract/sensitive area and buffer. The vegetation within the tract/sensitive area and buffer may not be cut, pruned, covered by fill, removed or damaged without approval in writing from the King County Department of Development and Environmental Services or its successor agency, unless otherwise provided by law.

The common boundary between the tract/sensitive area and buffer and the area of development activity must be marked or otherwise flagged to the satisfaction of King County prior to any clearing, grading, building construction or other development activity on a lot subject to the sensitive area tract/sensitive area and buffer. The required marking or flagging shall remain in place until all development proposal activities in the vicinity of the sensitive area are completed.

No building foundations are allowed beyond the required 15-foot building setback line, unless otherwise provided by law.

21. The proposed subdivision shall comply with the sensitive areas requirements as outlined in KCC 21A.24. Permanent survey marking, and signs as specified in KCC 21A.24.160 shall also be addressed prior to final plat approval. Temporary marking of sensitive areas and their buffers (e.g., with bright orange construction fencing) shall be placed on the site and shall remain in place until all construction activities are completed.

Preliminary plat review has identified the following sensitive area issues which apply to this project. All other applicable requirements for sensitive areas shall also be addressed by the applicant.

a. Within the project site, a 100-foot-wide buffer shall be provided from Wetlands 3 and 17, and a 50-foot-wide buffer shall be provided from Wetlands 1 and 18. Buffer averaging may be approved, if LUSD determines it is consistent with KCC 21A.24.320B.

Bonding may be required by LUSD to assure the installation of required plantings in a buffer averaging proposal, and the survival of such plantings for a five year period. If at

the end of the five year maintenance period, the plantings have not survived, the applicant shall address this matter to the satisfaction of LUSD.

b. Road improvements to Beaver Lake Dr. will encroach into Wetland 17 and may encroach into the wetland buffer for Wetland 18. Such encroachments are permitted and mitigation shall be provided consistent with KCC 21A.24.330N.

A mitigation plan shall be prepared by the applicant, and submitted for review and approval by LUSD. Bonding may be required by LUSD to assure the installation of required plantings and the survival of such plantings for a five year period. If at the end of the five year maintenance period, the plantings have not survived, the applicant shall address this matter to the satisfaction of LUSD.

c. Steep slopes are defined in KCC 21A.06.1230. Determine the top, toe, and sides of all steep slopes on the site by field survey. Provide a 50-foot native growth buffer from these slopes, except to the extent that such slopes are permitted to be modified or the steep slope buffer reduced, pursuant to KCC 21A.24.310A and F. Note that this condition may require the re-design of the west end of SE 23rd Pl., its intersection with SE 26th St., and the nearby proposed lots.

d. The applicant shall delineate all erosion hazard areas on the site on the final engineering plans. (Erosion hazard areas are defined in KCC 21A.06.415.) The delineation of such areas shall be approved by an LUSD senior geologist. The requirements found in KCC 21A.24.220 concerning erosion hazard areas shall be met, including seasonal restrictions on clearing and grading activities.

e. Seasonal clearing restrictions apply to this site from three sources: KCC 16.82.150D, 21A.24.220, and SEPA Condition No. 28 below. Applicable notes shall appear on the final plat and engineering plans to indicate where such requirements apply. Where the requirements overlap, the most restrictive requirement shall apply.

f. All on-site wetland and wetland buffers shall be placed in a sensitive area tract. All on-site steep slope hazard areas and their buffers shall be in a sensitive area tract or a "sensitive area and buffer" (see Condition 20 above), consistent with KCC 21A.24.180.

g. The hydrology of wetland 18 (at the north end of the plat) shall be maintained to the extent feasible. The hydrology of wetlands 1 and PC-17 shall be maintained consistent with variance L98V0109.

h. Provide a 15 foot wide building setback from all required sensitive area tracts and buffers associated with wetlands and steep slopes.

22. Suitable on-site recreation space shall be provided consistent with the requirements of KCC21A.14.180 and KCC 21A.14.190 (i.e., sport courts, children's play equipment, picnic tables, benches, etc. A recreation space plan and improvements for the entire plat shall be provided, consistent with the following

a. An overall conceptual recreation space plan shall be submitted for review and approval by LUSD, with the submittal of the engineering plans. The conceptual recreation plan

shall include location, area calculations, dimensions, and general improvements. The approved engineering plans shall be consistent with the conceptual plan.

b. A detailed recreation space plan (i.e., landscape specifications, equipment specifications, etc.) consistent with the overall conceptual plan noted in Item "a" above, shall be submitted for review and approval by LUSD and King County Parks, prior to or concurrently with the submittal of the final plat documents.

c. A performance bond for recreation space improvements to assure their installation, and the survival of required plantings for a three year period, shall be posted prior to recording of the plat.

23. A homeowners' association or other workable organization shall be established to the satisfaction of LUSD which provides for the ownership and continued maintenance of the recreation and open space areas.

24. Street trees shall be provided as follows:

a. Trees shall be planted at a rate of one tree for every 40 feet of frontage along Beaver Lake Dr., SE 26th St., and the improved portion SE 16th St. Spacing may be modified to accommodate sight distance requirements for driveways and intersections.

b. Trees shall be located within the street right-of-way and planted in accordance with Drawing No. 5-009 of the 1993 King County Road Standards, unless King County Department of Transportation (KCDOT) determines that trees should not be located in the street right-of-way.

c. If KCDOT determines that the required street trees should not be located within the right-of-way, they shall be located no more than 20 feet from the street right-of-way line.

d. The trees shall be owned and maintained by the abutting lot owners or the homeowners' association or other workable organization, unless the County has adopted a maintenance program. This shall be noted on the face of the final recorded plat.

e. The species of trees shall be approved by DDES and KCDOT if located within the right-of-way, and shall not include poplar, cottonwood, soft maples, gum, any fruit-bearing trees, or any other tree or shrub whose roots are likely to obstruct sanitary or storm sewers, or that is not compatible with overhead utility lines.

f. The applicant shall submit a street tree plan and bond quantity sheet for review and approval by DDES prior to engineering plan approval. KCDOT shall also review the street tree plan if the street trees will be located within the right-of-way.

g. The street trees must be installed and inspected, or a performance bond posted prior to recording of the plat. If a performance bond is posted, the street trees must be installed and inspected within one year of recording of the plat. At the time of inspection, if the trees are found to be installed per the approved plan, a maintenance bond must be submitted or the performance bond replaced with a maintenance bond, and held for one year. After one year, the maintenance bond may be released after DDES has completed a second inspection and determined that the trees have been kept healthy and thriving.

A $538 landscape inspection fee shall also be submitted prior to plat recording. The inspection fee is subject to change based on the current County fees.

MDNS (modified)

The following conditions have been established under SEPA authority as necessary to mitigate the adverse environmental impacts of this development. The applicant shall demonstrate compliance with these items prior to final approval. Text underlining indicates those portions of the MDNS that are revised by this order. See, particularly, conditions 27.C., 28.E.6.b., 28J. and 31.

25. **Issaquah Fall City Road/East Lake Sammamish Pkwy and Front Street I-90 Ramps**

A. In order to assure fair share payment into the SPAR Road corridor, this project shall pay a pro-rata share towards the North and South SPAR Road projects consistent with the developer's portion of CIP Projects 101289 and 200496. The developer's portion has been calculated at:

CIP 101289: SPAR North	$219 per single family residential unit; $131 per multifamily residential unit.
CIP 200496: SPAR South -	$299 per single family residential unit. $179 per multifamily residential unit.

If an updated MPS fee schedule, which includes the North and South Spar Road CIP projects, is adopted at the time of final plat recording for Beaver Lake Estates Phase II and if the developer chooses to pay MPS fees at the time of building permit approval a pro-rata share payment, as noted above, will no longer be required at the time of final plat approval.

B. The applicant shall enter into a legal agreement that requires a mitigation payment for the Sunset/I-90 Interchange as required by WSDOT. This contribution shall be paid in full prior to final plat recording. Receipt of payment will result in the project being deemed mitigated by WSDOT.

26. **SR 202/Sahalee Way**

The applicant shall mitigate the safety impacts by entering into a legal agreement that requires mitigation payment to the WSDOT SR 202 project. This contribution shall be paid in full prior to final plat recording. Receipt of payment will result in the project being deemed mitigated by WSDOT.

27. **Patterson Creek Water Quality/Fish Habitat**

A. All lawn and landscaped areas shall be amended with 4 inches of well-rotted compost. The compost shall be tilled into the native soil to a depth of 6 to 8 inches. Compost shall either comply with guidelines for compost quality on page 6-44 of the King County

Surface Water Design Manual, September 1998 draft, or Ecology guidelines for Grade A compost quality (publication 94-38).

In areas where tilling is not feasible, a 6-inch layer of hog fuel or shredded wood (not to be confused with beauty bark) shall be applied on top of the ground surface. Slopes with a slope of 2:1 or greater must use biodegradable erosion control blankets (usually made from coconut fiber, wheat straw, jute, etc.,) with no more than 10% open surface to secure the mulch layer. Where slopes are less than 2:1, and erosion control concerns are minimal (e.g. ditches that do not receive flashy, seasonal, and/or intermittent high volume flows), the mulch layer, at a minimum, must be secured with jute matting with 1/4 inch mesh. However, erosion control blankets are preferred.

Special construction inspection shall be required prior to installation of final landscaping on any lot. A performance bond shall be posted prior to issuance of a building permit to ensure compliance with this condition. A note to the effect shall be placed on the final plat.

B. Rain gardens or infiltration trenches shall be used to the extent feasible to evaporate and/or infiltrate roof runoff. Rain gardens are basins or depressions planted with trees or shrubs that tolerate very wet conditions, such as willow, spirea, etc., and to which runoff water is directed before it is collected in the regular engineered drainage system. If rain gardens are used, a planting plan shall be submitted to DDES for review and approval, prior to engineering plan approval. The applicant shall post a bond to assure the installation of required plantings, and their survival for a period of three years.

C. Porous pavement or other permeable surface materials shall be used for all patios, walkways and paved surfaces outside of the road right of way and not intended for vehicular traffic within the Patterson Creek Basin. A note to this effect shall be placed on the final plat and engineering plans and building permit plans. The final plat and engineering plans shall graphically show the portion of the subject plat to which this requirement applies.

During review of the engineering plans, the applicant and King County shall determine the feasibility of using porous pavement alternatives to traditional concrete for roads, driveways and sidewalks in the road right of way in the Patterson basin. If determined appropriate by the County, porous pavement shall be utilized. In addition, minimum road widths allowable per King County Road Standards shall be used to reduce the amount of impervious surface in the basin.

28. **On-site Patterson Creek 17 bog**

A. Except for roof runoff, runoff entering the bog by surface flow shall be treated with a treatment option from the sphagnum bog protection menu in the September 1998 King County Surface Water Design Manual.

B. Roof runoff or runoff entering the bog via interflow or infiltration shall be treated with a treatment option from the basic water quality menu in the September 1998 King County Surface Water Design Manual. If the cation exchange capacity (CEC) of the soils in the

infiltration zone is less than 5 me/100mg, then a 5% (by volume) mix of peat and sand shall be worked into the top two feet of soil. Soil amendment shall not be required if it is subsequently determined that only roof runoff will enter the infiltration facility.

C. The periphery of the bog buffer shall be fenced to limit public access into the bog mat. Gates shall be provided at two points to allow access into the bog for scientific and educational purposes.

D. To prevent air-borne dust and pollutants from entering the bog, the entire periphery of the bog shall be planted with a screen of closely-spaced evergreen trees. The trees shall be capable of forming a continuous wall of vegetation from bottom to top and achieve a height of 25 feet within 5 years. This requirement may be eliminated on the eastern and southern edge of the bog adjacent to the existing esker if the esker remains undisturbed.

The moisture regime in the area the trees are to grow should be considered in selecting tree species. Some possibilities include western red cedar and sitka spruce. Native species are preferred and are required within the wetland or wetland buffer. Where roadways adjoin the bog, the trees shall be located between the bog and the roadways as close to the roadway as possible. In some areas, this may require trees to be planted within the wetland buffer or the edge of the wetland itself. No mechanical means shall be used for planting within the wetland or wetland buffer.

A planting plan shall be prepared and submitted to the County for approval before planting is done; however, trees shall be planted as early as feasible after preliminary plat approval and shall be completed before final plat approval. The planting plan shall include plant species, size, locations, maintenance, and monitoring and bonding for a five year period.

E. Because cations contained in the soil and construction materials are highly toxic to sphagnum moss, no runoff water may enter the bog via surface flow during plat and home construction. To implement this requirement, the following conditions shall be met:

1) Temporary erosion and sediment control (TESC) measures shall be established and maintained throughout the time plat and home construction activity occurs. A note to this effect shall appear on the final plat and engineering plans, and on the building permit plans.

2) Only clearing that is necessary to install TESC measures shall occur prior to clearing for roads and utilities. A note to this effect shall appear on the engineering plans.

3) Prior to final Plat approval, clearing in any areas within the PC 17 watershed or any other areas that may drain to PC 17 as a result of site alterations shall be limited to only that necessary for roadway and utility development. A note to this effect shall appear on the engineering plans. Clearing limits for roads, sewers, water, permanent stormwater utilities and TESC facilities shall be marked in the field and approved by King County prior to any alteration of existing vegetation.

4) The applicant shall designate a TESC supervisor for the PC 17 drainage subbasin. The supervisor shall have demonstrated expertise in erosion control. The site shall be reviewed at least weekly as if construction is occurring in the wet season, and within 24 hours of significant storms. A written record of these reviews shall be kept on-site with copies submitted to DDES within 48 hours. A sign shall be posted at all primary entrances to the site that clearly identifies the TESC supervisor and their phone number. A note to this effect shall appear on the engineering plans, final plat and building permit plans.

5) If the applicant elects to install a temporary by-pass in place, construction work related to clearing, grading and filling shall be limited to April 1 to September 31 unless otherwise approved by King County. No soil disturbance (including individual residential or multifamily building pad preparation) shall occur outside the specified time limits unless otherwise approved by King County. A note to this effect shall be placed on the final plat, engineering plans and building permit plans, unless Item 6 below applies.

6) The applicant shall submit a design at engineering plan submittal for a temporary storm conveyance system designed to bypass all flows during the construction phase (plat infrastructure and building construction). The design shall be approved by King County and installed prior to any clearing activityIf the applicant elects not to install a temporary by-pass, the following additional restrictions apply:

   a) Complete soil cover shall be established continuously for all areas in the PC 17 basin for the winter months from September 1st through June 30th. A note to this effect shall appear on the final engineering plans, and the area to which it applies shall be identified on the plans.

   b) Construction work related to clearing, grading and filling shall be limited to the months of July and August <u>for the PC-17 basin</u>. Earthwork may be extended into September on a week by week basis with approval from DDES if the weather is dry. No soil disturbance (including individual residential or multifamily building pad preparation) shall occur outside the specified time limits unless otherwise approved by King County. A note to this effect shall be placed on the final plat, engineering plans and building permit plans. This condition may be waived if the County approves an alternative plan of operation that assures sediment would not be delivered to the bog or to soils which are within the PC 17 drainage subbasin.

   c) To handle sudden rainstorms in July and August, conventional temporary erosion control methods, including the use of diversion trenches to direct water away from PC17, shall be employed.

F. To prevent tracking of soil on vehicle tires, no construction vehicles from this development may use roads in the PC 17 basin, including that portion of Beaver Lake Drive within the basin, except during the months of July and August, with discretionary extension into September when authorized by DDES. A note to this effect shall appear on the engineering plans, final plat and building permit plans. The TESC supervisor shall monitor this condition and immediately report any violations to the County. This

condition shall not apply to construction vehicles delivering building materials to the site once pavement is installed provided the delivery vehicles do not drive on unpaved surfaces. This condition may be waived if the County approves an alternative plan that assures no soil is tracked onto roads draining either directly or indirectly via interflow into PC 17.

G. All earthwork in the areas to the east of PC 17 on lots 59 through 68 and along East Beaver Lake Drive shall be managed so that runoff flows away from the bog, or the restrictions in condition E shall also apply to those areas.

H. Portland cement leaches calcium that can be mobilized by runoff water, and is toxic to sphagnum moss. The use of portland cement for roads, driveways, sidewalks and drainage system elements within the bog watershed should be minimized and substitutes used where feasible, or the runoff from concrete surfaces except for building foundations must be diverted from the PC 17 basin and treated and detained in an adjacent drainage basin.

I. Wash-out of all cement trucks must be tightly controlled so that calcium-containing water is not disposed of either to the ground or the drainage system in the PC 17 drainage basin. A plan shall be prepared to assure that the use of pre-cast concrete or poured cement within the subbasin, for both the plat and for building construction, is managed without any discharge of calcium-bearing water to the ground or drainage system. This plan shall identify construction activity controls as well as implementation guarantees and monitoring sufficient to achieve the objective of no calcium discharge to ground or to the drainage system. Among the controls proposed shall be the use of an on-site special inspector having the authority to issue stop-work orders who shall be on site at all times when fresh concrete is poured. The plan shall also address how the use of cement by homeowners will be controlled and the control of plaster wall-board waste during home construction. The plan shall be approved by King County as part of engineering plan review. Based on the provisions of the approved plan, appropriate notes shall be placed on the final plat and building permit plans.

J. Exposed aggregate may not be <u>constructed</u> within the PC 17 drainage sub-basin, <u>but may be imported (pre-constructed off site) to the PC-17 sub-basin</u>. A note to this effect shall be placed on the final plat, engineering plans and building permit plans.

K. A five (5) year monitoring plan addressing vegetation, water quality and water level fluctuation characteristics of PC 17 shall be prepared by the applicant and approved by DDES. The plan shall identify goals, specify parameters, number of stations, frequencies, instrumentation, duration of monitoring, weather conditions triggering sampling, duration of sampling, data analysis methods including statistical analysis, reporting frequencies and QAQC procedures.

a) The applicant shall reimburse administrative costs for County review of the monitoring plan.

b) The monetary cost to carry out the monitoring plan shall be established on the basis on three estimates, two by firms with expertise in environmental monitoring and one by the County. The firms providing estimates shall be agreed to jointly by the County and the applicant. If agreement cannot be reached, the County shall establish the cost.

c) Administrative costs to track progress of the project, review the monitoring data, and report of finding of the monitoring program shall be estimated by the County. Administrative costs shall not exceed 10% of the monitoring plan cost.

d) A mechanism, such as a fund accessible to the County, shall be agreed to by the applicant and King County to assure funds are committed to conduct and administer the monitoring program. This mechanism shall include a process for the disposition of any unspent money.

29. **Off site Patterson Creek 18 bog**

No surface water shall be discharged from the site to the Patterson Creek 18 wetland bog until the drainage and water quality facilities required to be installed by Trossachs Division 9 variance L99V0008 are operational. A note to this effect shall be included on the final plat and engineering plans.

30. **Education**

A home owners pamphlet shall be prepared and distributed to home purchasers. The pamphlet shall cover the following:

- The fishery value of Patterson Creek
- The endangered status of Puget Sound salmon
- Alternatives to roof maintenance with toxic chemicals and yard maintenance with pesticides
- Environmentally friendly lawn care practices
- Placement of mulching materials to increase permeability
- Explanation of rain gardens and maintenance procedures if located on single family lots
- The value of the sphagnum bog and the possible chemical contamination by homeowners, including the installation runoff from exposed aggregate concrete.
- The air pollution protection benefits associated with the tree buffer.
- Telephone numbers, internet sources of additional information.

The County shall review and comment on the draft pamphlet before it is finalized.

31. The Applicant for Beaver Lake Estates Division II shall individually, or proportionately with the plats of Aldarra and Trossachs Divisions 8 and 9 provide the following:

a. Full funding of design and construction of a traffic signal at the intersection of Duthie Hill Road/Trossachs Boulevard. Prior to recording of Beaver Lake Estates Division II the Applicant must provide traffic counts and signal warrant analysis to King County Traffic Engineering to determine the timing of signal installation. The Applicant can either: install the traffic signal if warranted, or pay a proportionate share with the plats of Aldarra and Trossachs Divisons 8 and 9 to provide full funding to King County for a CIP project to install the traffic signal when warranted. Engineering plans for the signal design must be reviewed and approved by King County Traffic Engineering prior to engineering plan approval.

b. Full cost of design and construction of an eastbound left turn lane and eastbound left turn merge lane on Duthie Hill Road for left turns into and out of Issaquah Beaver Lake Road. Engineering plans for this improvement must be reviewed and approved by King County traffic Engineering and DDES prior to engineering plan approval.

ORDERED this 3rd day of September, 1999.

_____

R. S. Titus, Deputy
King County Hearing Examiner

TRANSMITTED this 3rd day of September 3, 1999, to the parties and interested persons shown on the attached list.

NOTICE OF RIGHT TO APPEAL

In order to appeal the decision of the Examiner, written notice of appeal must be filed with the Clerk of the King County Council with a fee of $125.00 (check payable to King County Office of Finance) ***on or before September 17, 1999*** If a notice of appeal is filed, the original and six (6) copies of a written appeal statement specifying the basis for the appeal and argument in support of the appeal must be filed with the Clerk of the King County Council ***on or before September 24, 1999***. Appeal statements may refer only to facts contained in the hearing record; new facts may not be presented on appeal.

Filing requires actual delivery to the Office of the Clerk of the Council, Room 403, King County Courthouse, prior to the close of business (4:30 p.m.) on the date due. Prior mailing is not sufficient if actual receipt by the Clerk does not occur within the applicable time period. The Examiner does not have authority to extend the time period unless the Office of the Clerk is not open on the specified closing date, in which event delivery prior to the close of business on the next business day is sufficient to meet the filing requirement.

If a written notice of appeal and filing fee are not filed within fourteen (14) calendar days of the date of this report, or if a written appeal statement and argument are not filed within twenty-one (21) calendar days of the date of this report, the decision of the hearing examiner contained herein shall be the final decision of King County without the need for further action by the Council.

MINUTES OF THE JULY 28, 29, 30, 1999 AND AUGUST 13, 18, 19, 20, 1999 PUBLIC HEARINGS ON DEPARTMENT OF DEVELOPMENT AND ENVIRONMENTAL SERVICES FILE NO.L97P0036-BEAVER LAKE ESTATES II:

R. S. Titus was the Hearing Examiner in this matter. Participating in the hearing and representing the Department of Development and Environmental Services were Lanny Henoch and Barbara Heavey. Participating in the hearing and representing the Department of Transportation (King County) was Dick Etherington. Participating in the hearing and representing the Applicant was Joel Haggard. Participating in the hearing and representing the Appellant Friends of Beaver Lake were David Shank and Tom Harmon. Citizens participating in the Community portion of this hearing were: Ruth Shearer, Joe McConnell, Charles Mauzy, Hank Walker, Lewis Scott, Claude Brazell, Donna Carlson, Catherine Kitto, Ben Barron, George Cone, Dennis O'Neill, David Hansen, Joann Anderson and Robert Seana. Other participants in this hearing were Richard Klein, Tom Uren, Laura Casey, Bruce Whittaker, Andrew Kindig, Christopher May, Sarah Spear Cooke, Mike Miller, Nadine Zackreson, Al Sauerbrey, Victor Bishop, Ted Schepper, Andrew Castelle, Elissa Ostergaard, Louise Kulzer, Aileen McManus, Joe Liebsack and Klaus Richter.

The following exhibits were offered and entered into the record during the public hearing held at 9:30 a.m. at DDES on July 28, 1999:

Exhibit No. 1 LUSD File No. L97P0036
Exhibit No. 2 LUSD staff report prepared for the 7/28/99 public hearing.
Exhibit No. 3a. SEPA environmental checklist, signed by the Applicant's representative on 9/8/97.
Exhibit No. 3b. Preliminary Geotechnical Report, prepared by Terra Associates, Inc., dated 8/29/97.
Exhibit No. 3c. Wetland Determination, Impact Assessment, and Mitigation Measures for the Beaver Lake Estates Phase II Supplemental Report, prepared by David Evans and Associates, Inc., dated 3/11/97 and revised 9/3/97.
Exhibit No. 3d. Plant and Animal Communities, prepared by Raedeke Associates, Inc., dated 8/28/97.
(Exhibits 3a-3d are bound in a single packet).
Exhibit No. 4 Wetland Vegetation and Water Quality Conditions of Wetland 3 on Beaver Lake Estates Phase II Final Report, prepared by David and Evans and Associates, Inc., dated 8/28/98.
Exhibit No. 5 SEPA Mitigated Determination of Nonsignificance, issued 4/21/99
Exhibit No. 6 Affidavit of Posting, received 7/7/99, indicating the subject property was posted with signs on 6/30/99 giving notice of the 7/28/99 public hearing.
Exhibit No. 7 Applicant's revised plat map, received 3/9/99 (4 sheets which include a site plan and topographic map).
Exhibit No. 8 Land use map—Kroll Maps 959E; 960E,W; 961E; 962E,W
Exhibit No. 9 King County Assessor maps depicting the subject property and surrounding properties—SW 1-24-6; SE 2-24-6; NW 12-24-6; NE 11-24-6.
Exhibit No. 10 Appeal of SEPA determination filed by James and Eileen Vigil, received 5/12/97
Exhibit No. 11 Appeal of SEPA determination filed by Friends of Beaver Lake, received 5/12/97
Exhibit No. 12 Beaver Lake Estates Phase II Revised Traffic Impact Analysis, prepared by Transportation Planning and Engineering, Inc., dated 9/9/98.
Exhibit No. 13 Level One Downstream Analysis, prepared by Hugh G. Goldsmith & Assoc., Inc., revised 9/98, received 9/11/98.
Exhibit No. 14 Road Variance Application L97V0105 and approval letter from Ronald J. Paananen, P.E., County Road Engineer, dated 12/17/97.
Exhibit No. 15 Surface Water Design Manual Variance L98V0109, received 9/11/98, and letter of approval from Joe Miles, P.E., Land Use Services Division, and Jeff O'Neill, Building Services Division, dated 2/23/99.
Exhibit No. 16 Comment letters from the following citizens:

Undated letter from Dorothy and Jim Roberge
11/29/97 letter from the Cimba Family
1/1/98 letter from Ruth W. Shearer
10/21/97 letter from George Harkey

11/20/97 letter from Kazuko Bill
11/26/97 letter from Scott, Kathi and Kailin Patterson
11/22/97 letter from Jennifer Fletcher
11/24/97 letter from Dale J. Swenson
undated note from Tom Sanderson
3/31/99 letter from Robert Seana
5/26/99 letter from Charles A. Mauzy
6/9/99 letter from Tim Seeley, President; Linda Mauzy, Secretary; and Kevin West, Treasurer, of the Beaver Lake Estates Homeowners' Association, with an e-mail cover memo.
Undated e-mail letter from Donna Carlson appended to an e-mail communication from Lanny Henoch to James O'Connor.

Exhibit No. 17 Surface Water Design Manual Variance L99V0008, received 1/19/99, and letter of approval from Joe Miles, Land Use Services Division, and Jeff O'Neill, Building Services Division, dated 2/16/99.
Exhibit No. 18 Resume of Richard Klein, Community & Environmental Defense Services
Exhibit No. 19 Fig. 5/Overview of Biological Integrity (Salmonids) vs. Watershed Development
Exhibit No. 20 Beaver Lake Management Plan
Exhibit No. 21 Report prepared by Richard Klein titled Effectiveness of the Mitigated Determination of Nonsignificance—Beaver Lake Estates Phase II in Preventing Significant Adverse Impacts to the Aquatic Environment, dated July 14, 1999.
Exhibit No. 22 Layout of Proposed Overall Drainage Plan for Beaver Lake Estates Phase II by Hugh Goldsmith & Associates, dated 9/10/98.
Exhibit No. 23 USGS Fall City Quadrangle map, annotated by Richard Klein.

The following exhibits were offered and entered into the record at the 7:00 p.m. Community Hearing held at Discovery Elementary School on July 28, 1999:

Exhibit No. 24 Newsprint map on the back side of an announcement advertising the Community Hearing, showing a culvert lined in red pencil.
Exhibit No. 25 Letter from Acar and Kazuko Bill to Hearing Examiner Titus, dated July 28, 1999
Exhibit No. 26 Letter from Charles and Linda Mauzy to the Office of the Hearing Examiner, dated July 28, 1999.

The following exhibits were offered and entered into the record on July 29, 1999:

Exhibit No. 27 E-mail letter to Barbara Heavey from Jennifer and Gary Prescott, dated July 29, 1999.
Exhibit No. 28 E-mail correspondence between Ms. Heavey and Mr. Richter, 3 pages.
Exhibit No. 29 Resume of Dr. Christopher W. May, Ph.D., fax dated 7/20/99
Exhibit No. 30 Report by Dr. Christopher May titled An Analysis of the Effectiveness of the Mitigated Determination of Nonsignificance (MDNS) for Beaver Lake Estates Phase II in Preventing Significant Adverse Impacts to the Aquatic Resources in Patterson and Canyon Creek Watersheds, dated July 14, 1999.
Exhibit No. 31 Developed Conditions Drainage Basin Map
Exhibit No. 32 Dr. Sarah Spear Cooke's resume, fax dated 7/21/99
Exhibit No. 33 Report by Elissa Ostergaard titled Beaver Lake Water Quality Protection:Wetland Condition of East Lake Sammamish 21 and Patterson Creek 17, dated April 19, 1999.

The following exhibits were offered and entered into the record on July 30, 1999:

Exhibit No. 34 Cooke Scientific Services Report, written by Sarah Spear Cooke and dated July 27, 1999.
Exhibit No. 35 Regional Study Supports Natural Land Cover Protection as Leading Best Management Practice for Maintaining Stream Ecological Integrity, written by Richard Horner and Christopher May.
Exhibit No. 36 Wetland map
Exhibit No. 37 National Pollution Removal Performance Database for Stormwater BMP's, dated August 1997.
Exhibit No. 38 Tom Uren's resume
Exhibit No.39a. Tom Uren Testimony Outline, dated July 12, 1999.
Exhibit No.39b. Memo to Mike Miller from Tom Uren on Hugh Goldsmith letterhead, dated May 17, 1999.
Exhibit No. 39c. Oversized diagrams, maps and charts A-O.
Exhibit No. 40 Beaver Lake Estates Phase II Statistical Fact Sheet with attachments P-T.
Exhibit No. 41 Letter Report by Tom Uren of Hugh Goldsmith & Associates, dated September 11, 1998
Exhibit No. 42 Illustration of Schearer Drainage System, drawn by Tom Uren.

The following exhibits were offered and entered into the record on August 13, 1999:

Exhibit No. 43 Beaver Lake Estates Phase II Supplemental Traffic Analysis with Barricade on SE 16th Street, from Transportation Planning and Engineering, Inc., to Mike Miller of Pacific Properties, dated July 20, 1999.
Exhibit No. 44 Summary of Testimony and Resume of Victor H. Bishop, P.E., Transportation Planning and Engineering, Inc., undated.
Exhibit No. 45 Beaver Lake Estates Phase II, Revised Traffic Impact Analysis, dated September 9, 1998 and received September 11, 1998.
Exhibit No. 46a Ted J. Schepper testimony outline, undated
Exhibit No. 46b Diagram depicting restrictive flow layer contours
Exhibit No. 47 Dr. Andrew Kindig's written testimony with his resume
Exhibit No. 48 Rebuttal presentation outline, Dr. Andrew Kindig, dated August 12, 1999
Exhibit No. 49a Study titled Lake Phosphorus Load from Septic Systems by Seasonally Perched Groundwater, dated October, 1983
Exhibit No. 49b Study titled Chemical Fate and Transport in a Domestic Septic System: Unsaturated and Saturated Zone Geochemistry, accepted date August 1992
Exhibit No. 49c Study titled Phosphorus Distribution from Septic Tank Effluent in Coastal Plain Soils, written by R. B. Reneau, Jr. and D.E. Pettry, dated 1976

(***Exhibits 49a-49c are three studies cited by Exhibit #48***)

Exhibit No. 50 Plat and vicinity drawing by Hugh Goldsmith and Associates, with water management annotations by Dr. Andrew Kindig.
Exhibit No. 51 Drainage Basin Map-Developed Conditions (Hugh Goldsmith & Assoc.) with drawings by Dr. Andrew Kindig.

Exhibit No. 52	Testimony and resume of Andrew Castelle
Exhibit No. 53	Memo from Andrew Castelle to the Hearing Examiner, dated August 8, 1999

The following exhibits were offered and entered into the record on August 18, 1999:

Exhibit No. 54	Resume of Theodore Schepper, P.E on Terra Associates letterhead
Exhibit No. 55	Report by Chang and Crowley titled Preliminary Observations on Water Quality of Storm Runoff from Four Selected Residential Roofs.
Exhibit No. 56	Exhibit #40, attachment 'S' as annotated by Tom Uren.
Exhibit No. 57	Letter dated August 11, 1999, written to the Examiner from Tom Uren
Exhibit No. 58	Testimony of Jim Kramer with response of Art Thornberry, dated March 31, 1993 (fax date is August 12, 1999).
Exhibit No. 59	Overall Site Map of Beaver Lake Estates II, print date August 13, 1999.
Exhibit No. 60	Beaver Lake Estates Phase II Overall Recreation Space Calculations, dated August 9, 1999
Exhibit No. 61	Recommended changes to Conditions 7c and 20 of the DDES Staff Report.
Exhibit No. 61	Pages 3-5 and 3-8; and pages 1-32 and 1-33 of the King County Surface Water Design Manual.
Exhibit No. 62	Beaver Lake Basin Map-Development Estimates
Exhibit No. 63	Study by Palmgren and Bennerstedt titled, Heavy Metals in Storm Water-Content and Sources
Exhibit No. 64	Patterson Creek Basin: Subdivision Proposals (colored map), annotated by Barbara Heavey and dated February 24, 1998.
Exhibit No. 65	DDES staff report revised conditions
Exhibit No. 66	City of Bellevue Urban Runoff Program, summary report, prepared by Pitt and Bissonnette, dated June 25, 1984.
Exhibit No. 67	E-mail from Jory Oppenheimer to Richard Klein, dated July 20, 1999
Exhibit No. 68	Study titled, Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMP's copyright dated July, 1997.
Exhibit No. 69	Figure 4.6 from Exhibit #68 as annotated by Richard Klein.
Exhibit No. 70	Revised recommended Condition 21g of DDES staff report
Exhibit No. 71	Attachment to Exhibit #41 as annotated by Joe M. Liebsack
Exhibit No. 72	Illustration of water budget analysis, as drawn by Tom Uren
Exhibit No. 73	Computation of TP loadings to PC-17 by A. Kindig, dated August 20, 1999 (with two handwritten changes).
Exhibit No. 74	Four oversized illustrations by Dr. Andrew Kindig.
Exhibit No. 75	Computation of TP loadings to PC-17, Corrected calculation of new development-caused TP by A. Kindig, dated August 20, 1999.
Exhibit No. 76	Letter to Lanny Henoch, DDES, from Lori Hoover, King County Parks Department, dated July 2, 1999.
Exhibit No. 77	Beaver Lake Estates Phase II Site Map with yellow highlights, indicating the Beaver Lake Protection Association's instructions for the Examiner's site visit.
Exhibit No. 78	Revised recommended Condition 21j of DDES staff report.
Exhibit No. 79a	Memorandum from Sarah Spear Cooke regarding Final Testimony Review and Comments, Beaver Lake Estates II, dated and received August 24, 1999.
Exhibit No. 79b	Attachment 1, titled Results of Monitoring King County Wetland & Stream Mitigations, by Anna Mockler, dated March 3, 1999
Exhibit No. 79c	Attachment II, titled Wetlands and Urbaniation: Implications for the future. Final Report on the Puget Sound Wetlands and Stormwater Management Research Program, by R. Horner and A. Azous, undated.
Exhibit No. 80a	August 26, 1999 written response from Applicant's Attorney Joel Haggard regarding Beaver Lake Estates II-Responses to Cooke Written Testimony (dated August 24, 1999)
Exhibit No. 80b	August 25, 1999 written reply from Andrew Castelle, Director of Natural Sciences, Adolfson Associates, to Cooke's written testimony (dated August 24, 1999)

RST:sje
Attachment
Plats\L97P0036 RPT